



B-118779

REPORT TO THE CONGRESS

Government Support Of The Shipbuilding Industrial Base

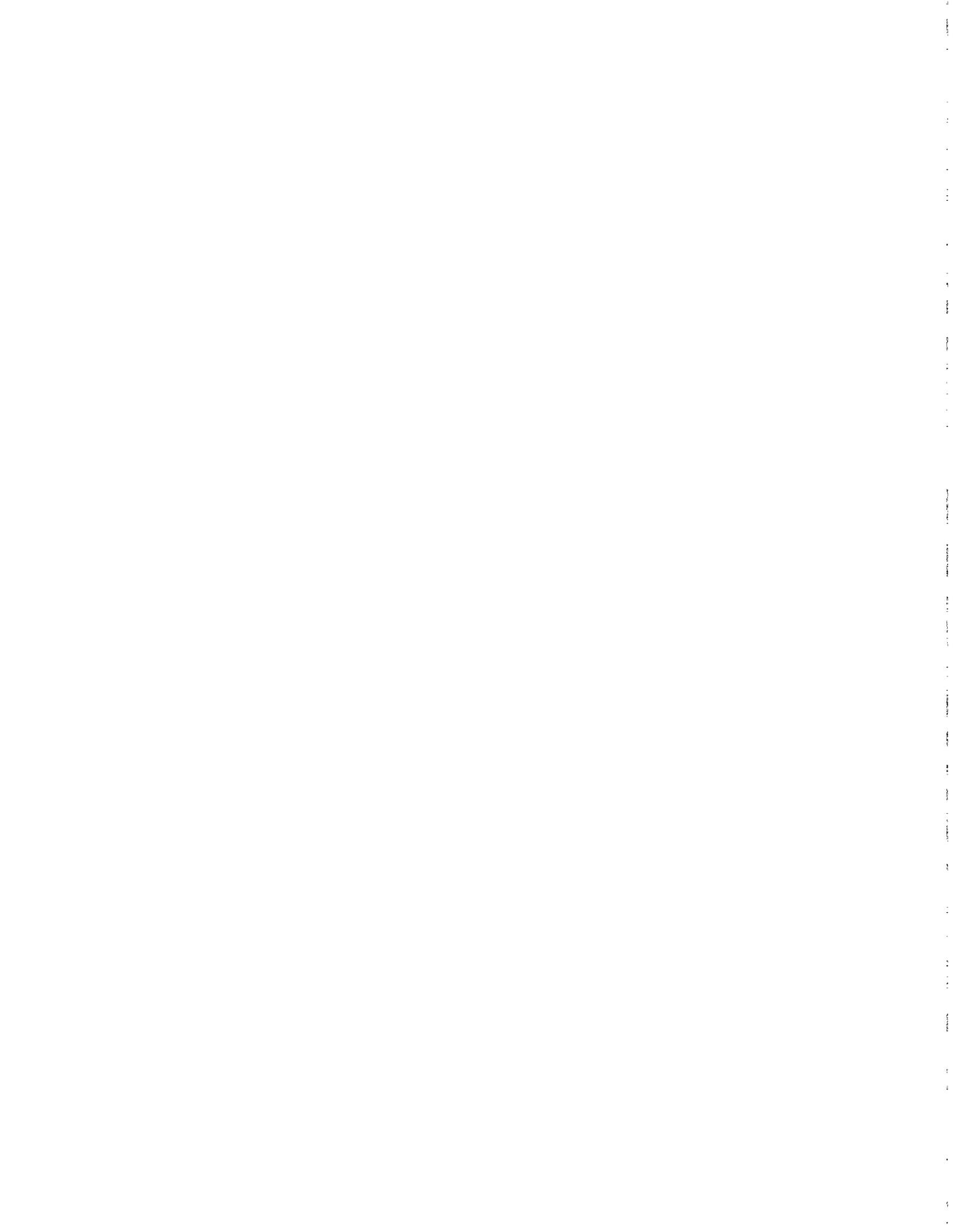
Maritime Administration
Department of Defense

708972

***BY THE COMPTROLLER-GENERAL
OF THE UNITED STATES***

PSAD-75-44

FEB. 12, 1975





COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118779

To the President of the Senate and the
Speaker of the House of Representatives

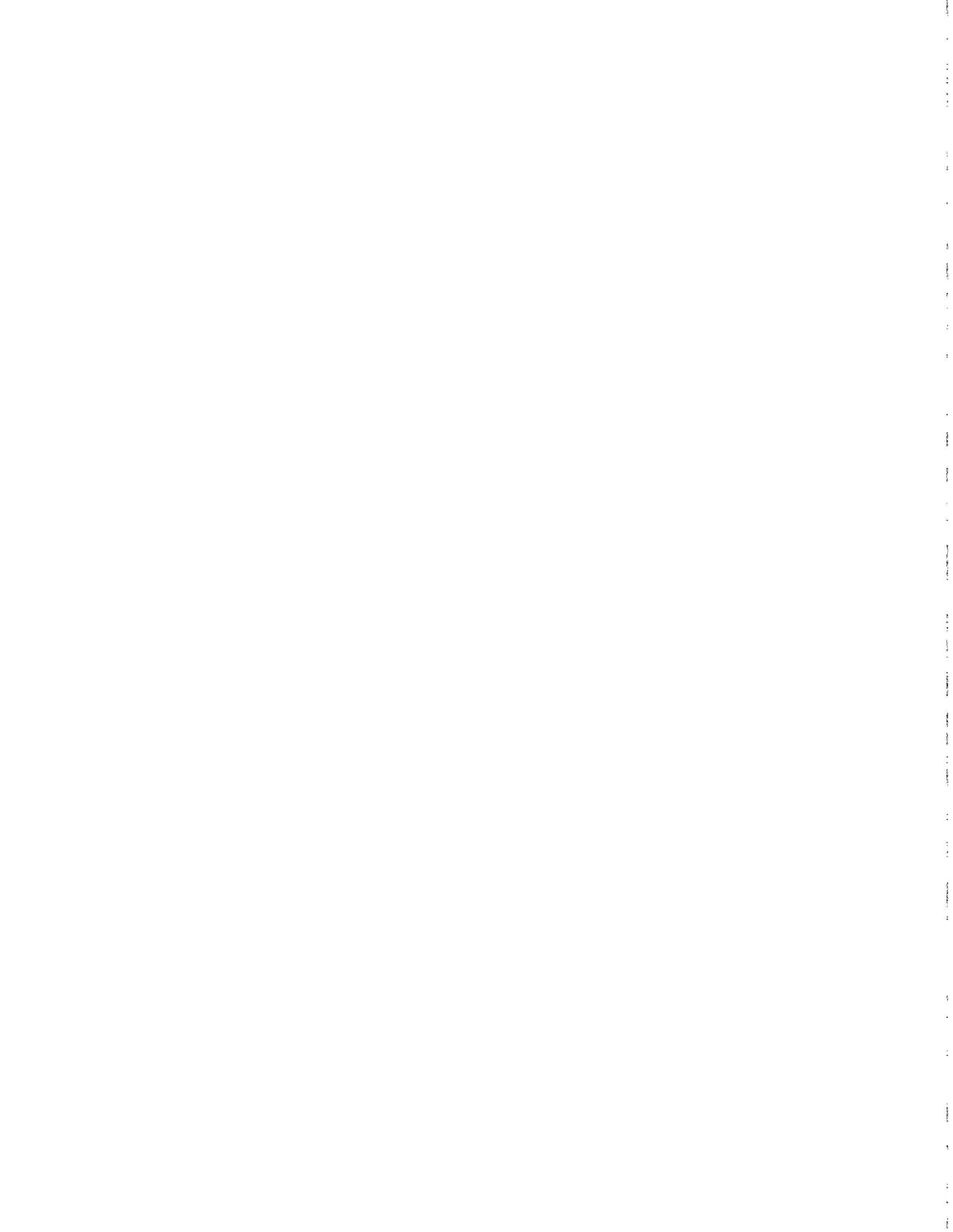
This is our report on Government support of the ship-
building industrial base.

Our review was made pursuant to the Budget and Account-
ing Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing
Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director,
Office of Management and Budget; the Secretaries of Defense,
Navy, and Commerce; and the Assistant Secretary of Commerce for
Maritime Affairs.

A handwritten signature in cursive script that reads "James P. Stacks".

Comptroller General
of the United States



C O N T E N T S

DIGEST		<u>Page</u>
CHAPTER		
1	INTRODUCTION	1
	Objectives of Government support of shipbuilding industry	1
	Means of Government support	2
	Commission on American Shipbuilding study	8
	Scope of review	8
2	PROBLEMS IN ASSESSING ADEQUACY OF INDUSTRY CAPABILITY FOR NATIONAL SECURITY PURPOSES	10
	Adequacy of shipbuilding mobilization base	10
	1973 MA assessment of industrial base adequacy	12
	Current MA position	13
	Conclusions	14
	Recommendations	15
	Agency comments and our evaluation	15
	Issue for consideration by the Congress	16
3	ECONOMIC BENEFITS OF CDS	17
	International economic benefits	17
	Domestic economic benefits	19
	Summary	22
4	OPPORTUNITIES TO MORE EFFECTIVELY AND ECONOMICALLY ACHIEVE NATIONAL SHIPPING AND SHIPBUILDING GOALS	24
	Link between merchant fleet and shipbuilding support	24
	Comparison with foreign shipbuilding countries	25
	Some disadvantages of linking fleet additions and shipbuilding	26
	Conclusions	37
	Agency comments and our evaluation	38
	Matters for consideration by the Congress	40

APPENDIX

Page

I	Recommendations of Commission on American Shipbuilding	41
II	Letter from Assistant Secretary of Commerce for Maritime Affairs, dated July 23, 1974	45
III	Letter from Acting Assistant Secretary of Commerce for Administration, dated October 23, 1974	49
IV	Letter from Assistant Secretary of Defense, (Installations and Logistics), dated September 11, 1974	54
V	Principal officials responsible for the activities discussed in this report	56

ABBREVIATIONS

CDS	construction differential subsidy
DOD	Department of Defense
GAO	General Accounting Office
MA	Maritime Administration

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

GOVERNMENT SUPPORT OF THE
SHIPBUILDING INDUSTRIAL BASE
Maritime Administration and
Department of Defense

D I G E S T

WHY THE REVIEW WAS MADE

Because of the importance of the American shipbuilding industry to national defense and to U.S. foreign commerce, and because a significant amount of Federal funds are provided to this industry, GAO studied the effectiveness of the principal Government program to maintain a shipbuilding industrial base. GAO assessed particularly the merchant ship construction subsidy program. (See p. 4.)

FINDINGS AND CONCLUSIONS

Government support of the shipbuilding industrial base partly insures that domestic capability exists to support the prosecution of a war.

The Merchant Marine Act of 1936, as amended, directs the Secretaries of Commerce and the Navy to assess the adequacy of the industry as a mobilization base at least once each year. No recent assessment has been made of the industry's ability to support prosecution of a short duration war, which is the Department of Defense emergency planning assumption for shipbuilding requirements.

A 1973 Maritime Administration study was based on a longer war. More recently, the Maritime Administration's position has been that the requirement for maintaining a domestic shipbuilding capability de-

pends more perhaps on the need to rebuild the merchant fleet after a war than on the need to support a war effort. (See pp. 13 to 15.) Early resolution of the Government's expectation of the shipbuilding industry is essential for defining clear and finite objectives for Government support of the industry.

National goals for both the shipbuilding industry and the merchant fleet could be achieved more effectively and economically if the Maritime Administration had the authority and flexibility to approve, in some circumstances (1) subsidized ship construction in U.S. yards for foreign-flag operation and (2) subsidized U.S.-flag operation of foreign-built ships.

Without this additional authority and flexibility the Maritime Administration is limited in its ability to:

- Provide desirable market stability for U.S. yards by leveling temporary peaks and valleys in U.S. shipbuilding activity.
- Avoid or minimize potential adverse impact of merchant shipbuilding on cost and delivery of Navy vessels.
- Promote specialization in constructing ship types which U.S.

yards are most competitive in building to encourage greater efficiency and economy in U.S. shipbuilding.

--Reduce Federal subsidy funds required to offset the difference between U.S. and foreign construction costs.

--Encourage U.S. shipyards to invest in facilities and maintain shipbuilding skills best suited to satisfy the Nation's needs for a private shipbuilding industrial base.

--Expand or modernize the U.S.-flag fleet rapidly and economically during periods when U.S. shipbuilding capacity or Federal construction subsidy funds are limited.

Market stability could be achieved by adjusting the construction subsidy program to complement changes in Navy and domestic merchant shipbuilding, the other two principal sources of business for the shipbuilding industry. (See p. 27.) The current construction subsidy program tends to aggravate, rather than relieve, peaks and valleys in U.S. shipbuilding activity.

For example, increased merchant ship construction activity in U.S. yards was of growing concern to the Navy. According to a January 1974 Navy report, as the commercial workload increases, competition for available shipyard facilities and skills tends to increase both costs and delivery times for military ships.

Partly because of the apparent shift in interest of many private shipyards away from new naval construction toward commercial ship construction, and because of apparent limitations in private shipyard capabilities, the Navy has recommended that the Secretary of Defense

consider placing some new construction in naval shipyards. (See p. 33.)

This situation might be relieved by allowing U.S.-flag operators to acquire some of their ships from lower cost foreign shipyards, thereby avoiding the need to spend construction subsidy funds to have them built in U.S. yards.

With repetitive or series construction of ship types which U.S. yards can most efficiently and economically build and with allowing subsidized U.S. ship operators to obtain those ships from foreign yards which if constructed in the United States would require relatively high subsidy rates, it should be possible to maintain the present or even higher level of U.S.-shipbuilding activity with a significant reduction of Federal funds. (See p. 29.)

Large amounts of subsidy funds are being spent to meet the growing demand for large oil tankers in the U.S.-flag fleet. This encourages U.S. shipbuilders to invest in facilities for tankers at a time when a worldwide overcapacity in this construction capability has been predicted.

Moreover, the facilities and skills required for large tanker construction may not be the kinds needed to satisfy U.S. industrial base needs.

During periods when it is in the national interest to quickly expand or modernize the U.S.-flag fleet, it may be advisable to supplement available U.S.-shipbuilding capacity by permitting U.S.-flag operators to acquire some ships from foreign yards. Foreign-built ships would not require

construction subsidies, so fleet expansion or modernization could be achieved quicker and at lower costs. (See p. 33.)

RECOMMENDATIONS

The Secretaries of Commerce and Defense should review with appropriate congressional committees their views on the emergency planning assumptions which should be used in assessing the adequacy of the shipbuilding industrial base. The Secretary of Commerce should periodically assess the industry's capability to support the planned war effort.

AGENCY ACTIONS AND UNRESOLVED ISSUES

GAO obtained comments from the Department of Defense and the Maritime Administration of the Department of Commerce. Defense basically agreed with the recommendation, stating that a forum should be established where Defense and the Maritime Administration could address the issues raised by this report. (See app. III.)

Maritime Administration stated that:

--It was aware of no difference between the views of the Departments of Commerce and Defense on the emergency planning assumptions that should be used in assessing the adequacy of the shipbuilding industrial base.

--The industrial base requirement perhaps depends more heavily on rebuilding the merchant fleet than on initial mobilization requirements.

--The recommendation that the Congress consider allowing greater flexibility in direct subsidy programs needs further analysis and

appears to be based on a "very narrow and questionable argument." However, its observations did not in themselves constitute a basis for rejecting the recommendation. (See app. II.)

GAO believes that if the Maritime Administration now accepts the Defense Department emergency planning assumption on war duration the industry should be assessed using that assumption. (See p. 14.)

Also, the assumptions leading to a requirement to rebuild the fleet need better definition and review by appropriate congressional authority before acceptance as justification for Government support of the industry. (See p. 15.)

Further, the Maritime Administration ignored disadvantages of present statutory requirements other than higher Government cost in deciding the flexibility recommendation had a narrow and questionable basis. (See p. 38.)

MATTERS FOR CONSIDERATION BY THE CONGRESS

The Congress should consider authorizing the Maritime Administration to approve, in appropriate circumstances, subsidized construction of ships in U.S. yards for non-U.S.-flag operation and the subsidized U.S.-flag operation for foreign-built ships. This authority will provide desirable flexibility in administering merchant marine support programs so that modifications can be promptly made to achieve the Nation's changing merchant fleet and shipbuilding capability needs most effectively and economically.

In addition, the appropriate congressional committees should review Maritime Administration's concept of the need to reconstitute the merchant fleet after a war as a justification for continuous peacetime support of the shipbuilding industry.

CHAPTER 1

INTRODUCTION

OBJECTIVES OF GOVERNMENT SUPPORT OF SHIPBUILDING INDUSTRY

The Merchant Marine Act of 1936 (46 U.S.C 1101) states that

"It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine * * * supplemented by efficient facilities for shipbuilding and ship repair."

This generalized language is expanded in a later section of the act that sets forth the objectives of a long-range maritime program and states that the program should accomplish "the creation and maintenance of efficient shipbuilding and repair capacity in the United States with adequate numbers of skilled personnel to provide an adequate mobilization base." This quote, according to the House of Representatives report on the bill that became the Merchant Marine Act of 1970, Public Law 91-469, was added by that act to recognize the need for maintaining efficient shipbuilding and repair facilities.

Judging by the policy statement, developing and maintaining a merchant marine was deemed necessary to

--provide capabilities deemed necessary for national defense and

--aid in developing our foreign and domestic commerce.

The section of the act quoted above explains that the national defense objective is for mobilization purposes, but the "development of its foreign and domestic commerce" objective as it pertains to the shipbuilding industry is less clear from the act. In hearings and speeches, support of the industry has been sanctioned citing various economic benefits that may be related to commercial objectives for shipbuilding. (See ch. 3.)

The Maritime Administration (MA) has two general objectives for support of shipbuilding: (1) maintaining an adequate mobilization base and (2) improving the efficiency of the industry.

MEANS OF GOVERNMENT SUPPORT

The Government has sought to insure an adequate shipbuilding industry through several types of direct and indirect assistance. The three major direct sources of demand for ship construction by U.S. yards have been (1) Navy construction, (2) merchant ships for use in foreign commerce built through the MA construction subsidy program, and (3) unsubsidized merchant ships for use in domestic trade built under the Jones Act (see p. 5). Figure 1 shows the shipbuilding demand between fiscal years 1964-73 from these three sources.

Navy shipbuilding

The most important source of demand for the shipbuilding industry, in terms of dollars, has been the Navy. For more than 20 years most Navy ships have been built by private yards, and since 1968 all Navy ship orders have been placed with private yards.

Since passage of the Merchant Marine Act of 1970 the Navy share of total shipbuilding demand has declined from 73 percent in fiscal year 1970 to 52 percent in 1972, although total Navy awards increased from \$886 million in 1970 to \$1,189 million in 1972. The Navy share of total awards declined to 21 percent in fiscal year 1973 with a reduction to \$371 million in awards.

Navy ship construction is expected to continue to play a major role in demands placed on the U.S. shipbuilding industry. One industry source estimates naval construction will contribute from 52 percent to 57 percent of U.S. private shipyard fleet construction revenues for 1973 through 1977.

Construction differential subsidy

Section 501 of title V of the Merchant Marine Act of 1936, as amended, authorizes U.S. ship purchasers or ship-

CONSTRUCTION AND MAJOR CONVERSION
 CONTRACT AWARDS TO
 U.S. PRIVATE SHIPBUILDING INDUSTRY

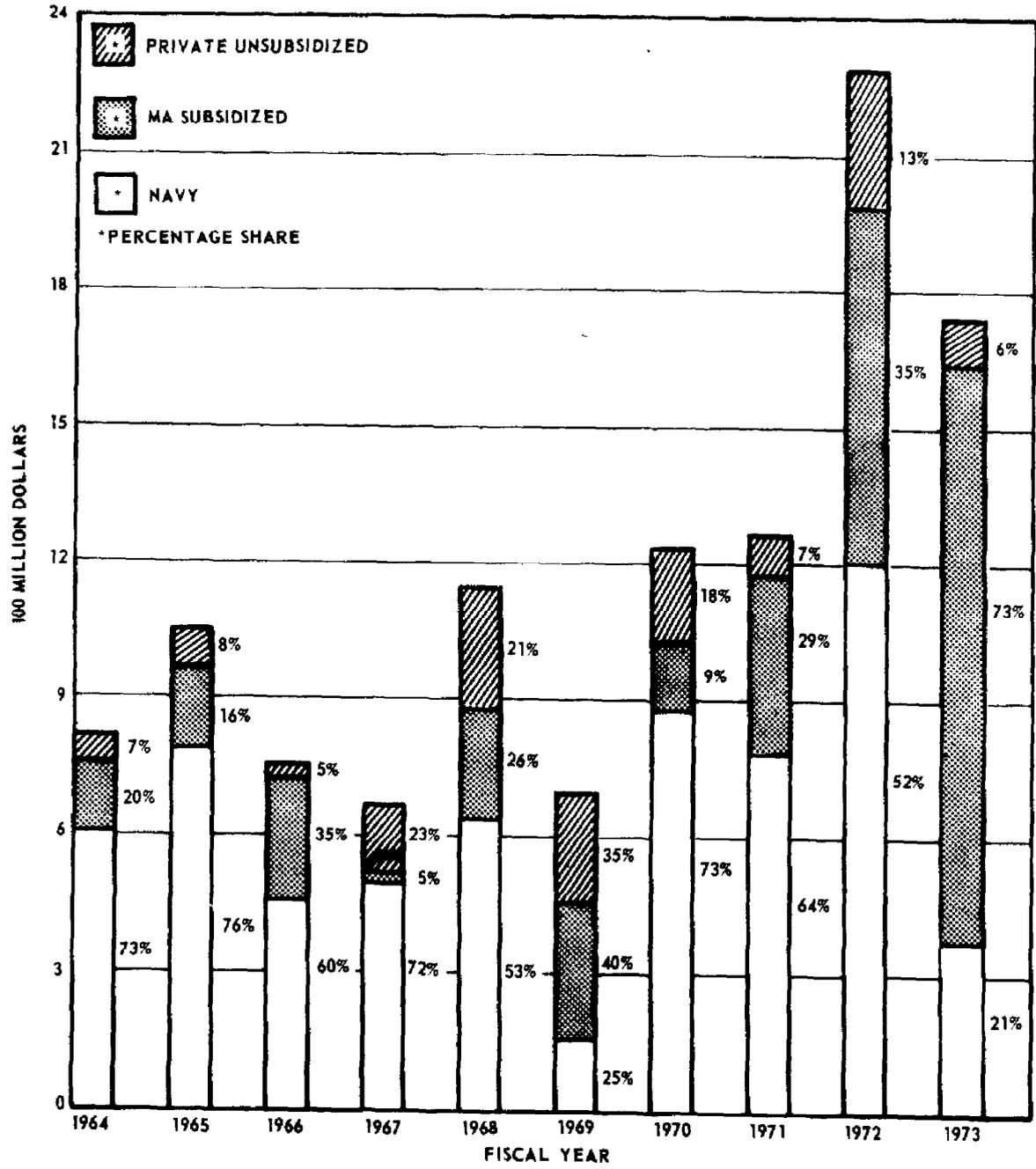


FIGURE 1

yards to apply to the Secretary of Commerce for a construction differential subsidy (CDS) to aid in constructing, reconstructing or reconditioning vessels to be used in U.S. foreign commerce. This subsidy is to compensate for the difference between the U.S. shipyard price and a fair and representative foreign yard price, as determined by the Secretary of Commerce. Under provisions of the 1970 Act, the maximum subsidy percentage was to be reduced 2 percent per year from 45 percent in fiscal year 1971 to 35 percent in 1976, with the Secretary of Commerce permitted to make exceptions. All subsidized contracts awarded to May 1974 have been within the limits of the 1970 Act.

The CDS program has considerably expanded since the 1970 Act. It has been the major part of a surge in demand on the shipbuilding industry that has carried the industry to a record peacetime high backlog of orders. Figure 2 on page 6 shows the history of MA appropriations for ship construction from fiscal year 1964 through 1974 and CDS expenditures through fiscal year 1973.

CDS ships represented 71 percent of all merchant ship contracts awarded between fiscal years 1964-73. As of October 1, 1973, about \$2.3 billion of subsidized ships were ordered but undelivered from U.S. yards.

MA recently forecast over \$14 billion of subsidized merchant ship construction contracts to be awarded between fiscal years 1974-85 with CDS payments to be about one-third of this total, or almost \$5 billion. These contracts, it is predicted, will account for 75 percent of the value of all merchant ship construction contracts awarded during this period.

As of January 1973 there were 24 major private U.S. yards and 8 naval shipyards, of which, only 12--all private yards--have been active in constructing either major commercial or naval ships. Since the end of fiscal year 1970, only 8 of the 24 private shipyards have been awarded contracts for constructing ships under the CDS program. As of October 1, 1973, of the 69 ships these shipyards had on order to be delivered after January 1, 1974, 42 were subsidized, 16 were Navy ships and 9 were being built for charter to the Military Sealift Command. Twelve of the Navy ships were at one yard.

Jones Act

Section 27 of the Merchant Marine Act of 1920, commonly known as the Jones Act, requires that, with minor exceptions, all waterborne merchandise between points in the United States be carried on U.S.-built and documented ships. Land and air transportation not so restricted are allowed to purchase capital equipment on the world market. Virtually all U.S.-built merchant ships are constructed either under the CDS program or for Jones Act domestic shipping.

MA recently forecasted more than \$4.7 billion of Jones Act merchant ship construction contracts to be awarded between fiscal years 1974-85, or 25 percent of the value of all merchant ship construction contracts to be awarded during this period.

Mortgage insurance

Title XI of the Act of 1936, as amended, allows the Secretary of Commerce to guarantee payment of obligations incurred for financing construction, reconstruction or reconditioning of vessels built and documented in the United States. The lessened risk through the Government guarantee improves financing terms for American-built ships. So, although shipyards receive no direct subsidy from this program, American yards appear to share an indirect subsidy with ship owners when the ship owner's decision on where to have his ship built is influenced by the U.S.-ship-financing package.

The ceiling authority for such outstanding loan guarantees is \$5 billion. During fiscal year 1973, the Government approved guarantee applications totaling about \$965 million. At the end of fiscal year 1973, total outstanding principal and interest under this program was \$2.5 billion, with \$1.3 billion more in pending applications.

The program had a net income of about \$7 million in fiscal year 1973, bringing total retained income to \$45 million.

Cargo preference

Three major laws give U.S. ships preference in carrying Government-related cargoes.

CDS APPROPRIATIONS AND EXPENDITURES FYs 1964 TO 1974

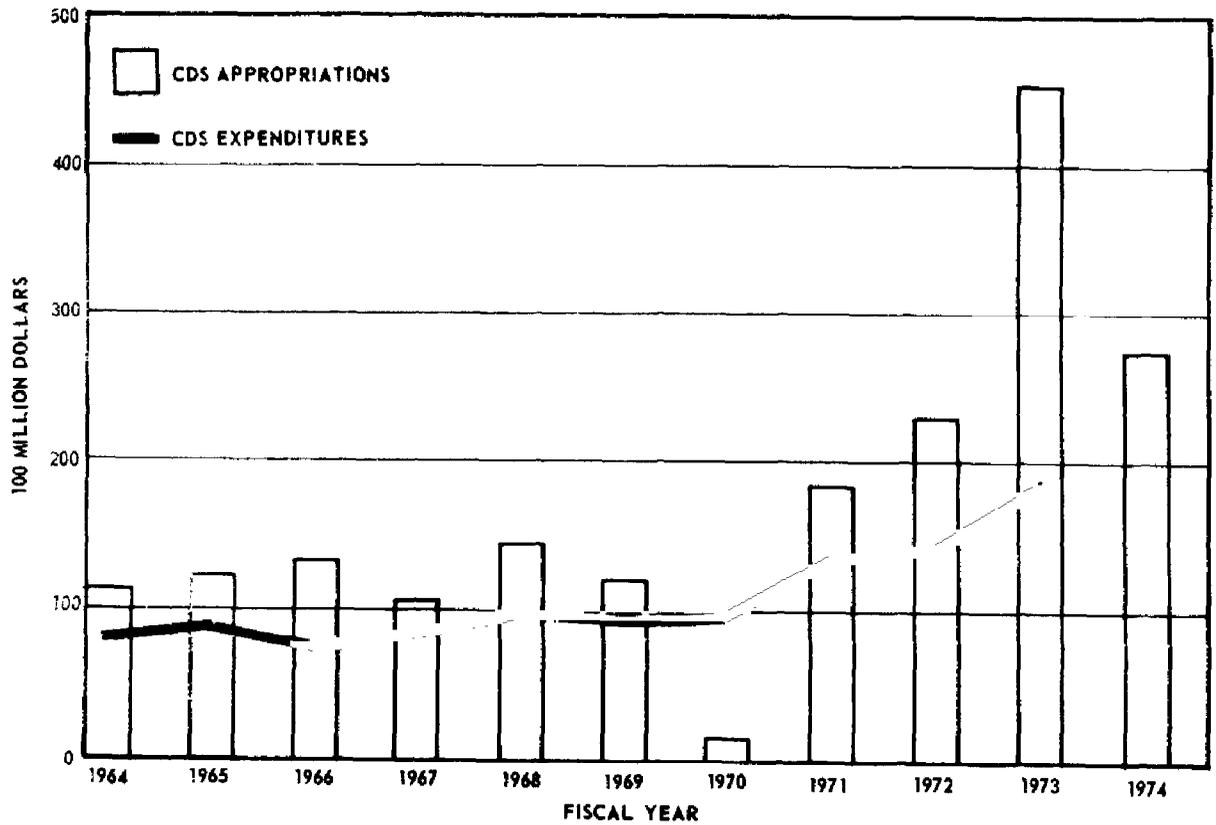


FIGURE 2

- The Military Transportation Act of 1904 (10 U.S.C. 2631), requiring military cargo to be carried in U.S. ships if freight charges are not unreasonable.
- Public Resolution 17 of the 73d Congress (15 U.S.C. 6168a), requiring that Government-aided exports be carried in U.S. ships where transportation is available at reasonable rates, and
- Public Law 664 of the 83d Congress, also known as the Chief Cargo Preference Act, requiring that at least 50 percent of the gross tonnage of goods for U.S. Government use or overseas aid or assisted export be carried in privately owned U.S.-flag vessels to the extent they are available at fair and reasonable rates.

Nine other aid or emergency relief laws contain similar cargo preference restrictions.

The U.S. merchant marine's foreign trade has depended on preferred cargo for its outbound business. It has been calculated that between 1964-69, preferred cargo comprised 78.1 percent of export tonnage and 5 percent of import tonnage carried on U.S.-flag ships, 52.8 percent of all U.S.-flag tonnage.

The Chief Cargo Preference Act was amended in 1961 to require that U.S.-flag ships, for cargo preference purposes, be U.S.-registered for at least 3 years if built, rebuilt, or registered outside the United States. U.S. yards are assisted by cargo preference provisions to the extent this 3-year qualification period encourages ship construction in U.S. yards.

Tax deferrals

Section 607 of the Merchant Marine Act of 1936, as amended, authorizes any U.S. citizen owning or leasing any U.S.-flag vessel to establish a capital construction fund for that vessel by agreement with the Secretary of Commerce. Each fund consists of a capital, capital gains, and ordinary income account. Amounts representing vessel depreciation costs are deposited in the capital account and are generally not taxable. Deposits in the capital gains and ordinary

income accounts are tax deferred while in the fund. If the funds are used for constructing, reconstructing or acquiring a U.S.-flag vessel the deferral continues unless the vessel is to be used for trade between contiguous U.S. points. Because the new vessel's earnings can be deposited in the fund and reinvested in a succeeding vessel, payment of tax can be deferred indefinitely. At the end of fiscal year 1973, there were 140 interim agreements and over \$2 billion in shipyard work was expected to result over the next 10 years.

COMMISSION ON AMERICAN SHIPBUILDING STUDY

The 1970 Act established a Commission on American Shipbuilding (hereafter referred to as the Commission) to determine whether the industry could achieve a level of productivity by fiscal year 1976 such that the CDS rate would not exceed 35 percent of the U.S. cost of each vessel and to recommend a course of action for Government and industry to improve the industry's competitive situation in world shipbuilding markets. If the Commission determined that CDS could not be reduced to 35 percent, it was to recommend alternatives to the ship construction program.

The Commission's October 1973 report concluded that the fiscal year 1976 goal of a 35-percent CDS rate would be attained, barring major unforeseen developments attributable to (1) changes in currency exchange rates, (2) rates of foreign wage increases and (3) productivity improvements. The report recommends several methods of Federal support of the shipbuilding industry. (See app. I.)

SCOPE OF REVIEW

Decisions on ship construction funding levels are based primarily on military justifications for new ships rather than on the need to maintain private shipbuilding capability. Therefore, we gave special emphasis to the role of the merchant ship construction subsidy program in maintaining the shipbuilding industrial base needed for national security and economic reasons.

We reviewed the laws authorizing the CDS program and policies and stated objectives affecting its scope and administration. We analyzed the program's effects, both

realized and potential, on the shipbuilding industrial base and examined the effects from the standpoint of their validity as objectives for the program.

We examined pertinent data and we interviewed many officials inside and outside the Federal Government who are or have been concerned with maritime affairs, shipbuilding industry officials, and others having knowledge and experience of the issues.

The Bureau of Labor Statistics rendered important assistance in our analysis of the employment effect of the CDS program. The Shipbuilder's Council of America, American Institute of Merchant Shipping, and Federation of American Controlled Shipping (formerly the American Committee for Flags of Necessity), also provided us with information.

CHAPTER 2

PROBLEMS IN ASSESSING ADEQUACY OF INDUSTRY

CAPABILITY FOR NATIONAL SECURITY PURPOSES

For national security purposes the shipbuilding industrial base needs to meet both mobilization and peacetime requirements. A national security peacetime requirement would be the capability to build the numbers and types of ships the Navy must add to its fleet to maintain readiness. Possible conflict between this need for a shipbuilding industry and the role of the CDS program in supporting a larger industry is discussed in chapter 4.

ADEQUACY OF SHIPBUILDING MOBILIZATION BASE

Planning criteria

As quoted in chapter 1, Government support of the shipbuilding industry is intended to maintain a mobilization base. Mobilization requirements, the industrial base needed to support prosecution of a war, depend on the type of emergency for which the United States wishes to be prepared. There would be three roles for the shipbuilding industry in support of the prosecution of a war: (1) ship construction, (2) ship repair, and (3) break out of the reserve fleet.

New ship construction capability for mobilization purposes is needed to replace losses during a protracted war to maintain requisite ocean-lift capability. A protracted war is specified because the war would have to be long enough for ship construction to support the war effort. A related shipbuilding requirement might be the capability to rebuild the Navy and merchant fleets within some time frame after a conflict. This is what MA has termed a "reconstitution" requirement. Acceptance of this requirement makes the industrial base requirement dependent on the time frame in which the fleet is to be reconstituted rather than on the duration of the war.

On the other hand, if the war for which the United States wants to be prepared is expected to be short, the mobilization base required to support it would be smaller

and production resources would need to be already present to a large degree. In this case, the most important mobilization feature would be to have readily available materiel resources, facilities, machinery, and in-place trained manpower. It also means that to be adequate as a mobilization base the shipyard facilities and labor need not be prepared to construct ships. The facilities and labor required for constructing ships may be different from what is required for breaking out the reserve fleet and repairing ships. If so, the support program should change to reflect this difference. We were not able to independently assess the difference in resource requirements and received different opinions about the difficulty of switching from a peacetime construction role to a wartime repair and breakout role.

Capacity required for ship repair depends less on a war's duration than on the intensity of the hostilities. Not all privately owned U.S. yards have the labor skills and facilities necessary to quickly repair the complex, and sometimes very large, combat vessels in the Navy's fleet. This work, therefore, falls on certain private and public yards.

Capability required for rapidly breaking out the national defense reserve fleet also depends less on the duration of a war. As of June 1973, the United States was retaining 325 ships in the reserve fleet. To reduce deterioration of these already old ships, the reserve fleet is in a "mothballed" condition. To activate the fleet, each ship must be drydocked while all the equipment is brought up to operating condition.

Assessment responsibility

The Merchant Marine Act of 1936, as amended, requires the Secretary of Commerce, with the advice and coordination of the Secretary of the Navy, to assess at least once each year the adequacy of the industry as a mobilization base. The Joint MA-Navy Shipbuilding and Repair Committee was created in 1970 to advise the Secretaries of Commerce and the Navy on mobilization adequacy and efficiency of the shipbuilding and repair industry and the impact of all Government and private shipbuilding programs upon the industry. This committee was to have provided the forum for the required annual assessment of shipbuilding industry adequacy.

The committee discussed fulfilling its charter at its first meeting in March 1971, but as of June 1974 the objective of organizing for annual assessment of shipbuilding adequacy had not yet been achieved.

In its October 1973 report, the Commission, commenting on the failure to meet the assessment requirement, stated that a level of shipbuilding facilities:

"sufficient for the Nation's economic and security requirements * * * cannot be attained, however, until annual review by the Secretary of Commerce and the Secretary of the Navy is fully discharged, reliably reported to the President and the Congress, and responsively acted upon."

1973 MA ASSESSMENT OF INDUSTRIAL BASE ADEQUACY

In 1973 MA, in response to a request from the Commission, assessed the U.S. shipbuilding industry as less than adequate for supporting the prosecution of a war. MA stated in a March 20, 1973, letter, "The essential conclusion is that present shipbuilding facilities are inadequate for mobilization needs by a factor of about 3 to 1." This assessment was based on inputs from the Navy and Department of Defense (DOD).

The Navy and DOD commented on the MA study in classified correspondence with the Commission. Navy comments were based on conflicts of limited duration, which was noted as DOD policy and the MA study was based on an assessment of shipbuilding requirements in a North Atlantic Treaty Organization war assumed to last a year. The Commission was not satisfied with the Navy comments because they were based on a different emergency situation. The Commission wrote to the Secretary of Defense requesting "a definitive statement from the Department of Defense as to its mobilization requirements with respect to shipbuilding." The Commission further requested that the assessment be made based on the assumption of protracted conflicts.

The DOD reply pointed out that the Navy position based on conflicts of limited duration correctly represented DOD policy. The reply went on to say that this policy did not

originate with DOD, "but rather with the President and the National Security Council * * *." National Security Decision Memorandum 133 of September 22, 1971, was referenced. DOD added that the MA study could be recommended as a source given the assumption made concerning the duration of the war, but "such an assumption is reflected neither in DOD policy nor in the Presidential and National Security Council policy upon which the DOD policy is based."

DOD apparently considered the 1973 U.S. ship construction capability adequate, although it has not recently made a formal study of the industry's capability to support a war effort. We were unable to find a recent study anywhere in Government of the industry's capability to support a war effort as visualized by DOD for its planning purposes. The 1973 MA study used a different assumption about the expected duration of a war.

The conclusions of the 1973 study, however, are no longer the MA position. MA now bases its requirement for a shipbuilding industry primarily on the need to reconstitute the fleet after a war. But this 1973 study is the latest available on the adequacy of the industry to support the prosecution of a war. We believe this adequacy should be monitored by the Government and that this monitoring can be improved by reviewing the 1973 study.

MA, in responding to our report said we had correctly represented differences of opinion regarding the probable duration of a future war assumed for its 1973 study. Because of the interim change in MA's position, MA now says it is aware of no difference between DOD and Commerce regarding emergency planning assumptions that should be used in assessing the adequacy of the shipbuilding industrial base. We believe this means MA now accepts the DOD position on the probable duration of a war. It follows that MA should reassess the need for shipbuilding capability considering currently accepted emergency planning assumptions.

CURRENT MA POSITION

MA's current MarAd position is that it is not clear that the adequacy of the shipbuilding industrial base is particularly sensitive to the likely duration of a future

major war. This is because the industrial base requirement is based on the need to replace ships for reconstituting essential commercial shipping service after a war rather than on mobilization needs during a war. Because most shipping losses probably would occur early in a war, duration is not the key to estimating the shipping that would have to be replaced after a war.

MA assessed the shipbuilding industrial base from this aspect and made the following comments.

"In a recent analysis, MarAd [MA] calculated the time required to replace U. S. shipping losses that might be expected in a major short war. Not counting losses of ships from the National Defense Reserve Fleet, it was assumed that some 165 merchant ships would have to be replaced (based on Navy analyses of probable sinkings), and shipbuilding capacity normally devoted to CDS-supported ships: (a) unavailable; (b) available and (c) increased by 50 percent. Under these three assumptions estimated years required for merchant fleet reconstitution were, respectively 9 3/4, 6, and 4 1/2, which might be reduced to some degree through concentration on simple utility ship designs, but which would still remain considerable in a period of shortage."

MA reached no conclusion on the adequacy of the industrial base because there has been no definition of how much time should be required to replace U.S. shipping losses that might be expected in a major war. This would require examination of the postwar need for merchant shipping. For this study, MA assumed the need to return the fleet to its prewar size and examined how long this would take.

CONCLUSIONS

Assessment of the shipbuilding industry's adequacy as a mobilization base must be made. The industry's capability to support the prosecution of a war is a major reason for Government support of the industry. Evaluating the effectiveness of that support is difficult without (1) clear definition of what war effort the industry should be able to support and (2) periodic assessment of its capabilities as a mobilization base relative to the requirement.

MA's current position that the industrial base requirement more heavily depends on replacing ships needed for reconstituting the merchant fleet after a war, appears to be a new justification for Government peacetime support of the industry. The difference between Government support of the industry because of its importance to national survival and because of its importance to economic recovery warrants (1) more thorough definition of the requirement to reconstitute the merchant fleet and (2) a comparison of the cost of delay in reconstitution compared with the cost of continuous peacetime support of the industry.

RECOMMENDATIONS

In the interest of the Government's effective monitoring of the shipbuilding industrial base, we recommend that (1) the Secretaries of Commerce and Defense should review with appropriate congressional committees their views on the emergency planning assumptions which should be used in assessing the adequacy of the shipbuilding industrial base. The Secretary of Commerce should periodically assess the industry's capability to support the planned war effort.

AGENCY COMMENTS AND OUR EVALUATION

MA said that "an industrial base for shipbuilding represents a useful hedge against the possibility of extended war." This would mean support of a mobilization base for emergency conditions other than those considered most likely by DOD. We believe the Government first should assure itself that the requirements of the most likely emergencies are met and then examine the cost of adding to the security provided by meeting such requirements.

DOD did not comment on our description of its position on the adequacy of the shipbuilding industrial base. It noted a current and future shortage of skilled manpower that should be a consideration in Government support of the industry. We believe that better definition of what the industry should be able to do to be considered adequate would result in greater attention to specific skills and facilities that need to be maintained through Government support.

DOD essentially agreed with our recommendation about emergency planning assumptions for assessing shipbuilding adequacy. It stated that after a joint review of mutual problems the Secretaries of Defense and Commerce should meet with the appropriate committees of Congress. (See apps. II, III, and IV for the full texts of the MA and DOD comments.)

ISSUE FOR CONSIDERATION BY THE CONGRESS

The appropriate congressional committees should review MA's concept of the need to reconstitute the merchant fleet after a war as a justification for continuous peacetime support of the shipbuilding industry.

CHAPTER 3

ECONOMIC BENEFITS OF CDS

The benefits of Federal support to the shipbuilding industry are complex mixtures of national security benefits, in the form of shipbuilding mobilization support (see ch. 2), and economic benefits. Through the long history of testimony on Federal shipbuilding policy and programs, many different economic benefits have been discussed. Our review did not include the work necessary to reach firm conclusions regarding the economic benefits from Government support to shipbuilding. Some important factors in assessing these economic benefits are discussed below.

INTERNATIONAL ECONOMIC BENEFITS

Avoids dependence on foreign sources

Protecting domestic merchant shipbuilding capabilities is necessary to avoid the possibility that (1) foreign sources would withhold ships from U.S. purchase at some critical time or (2) would make ships available for purchase only at unreasonable prices. Such possibilities are of concern when the critical time during which there is a need for ships is long enough for them to be built by the foreign source but not long enough for the United States to build them. Otherwise the need is to have ships available; not to have the capability to build ships.

This form of discrimination is likely to occur only if U.S. shipbuilding capability is largely nonexistent and the many available foreign sources reach some type of common decision to withhold sales from the United States. Based on military demand and Jones Act requirements, it is unlikely that shipbuilding capability and technology would fall this low. Also, this form of discrimination can prevail only if the United States has no means for overcoming such an international cartel other than a domestic shipbuilding capability.

Balance of payments

The MA Office of Policy and Plans has estimated that the planned CDS program will reduce U.S. purchases of foreign-built ships by \$6.8 billion (in 1971 dollars) between 1973-85. In its October 1973 report, the Commission also cited balance-of-payments benefits for the CDS program. The report cited a \$2.4 billion savings of foreign expenditures since the "enactment of the new maritime program in October 1970." The CDS program, over this period, cost \$0.8 billion. Thus, according to the Commission report, "every dollar in CDS funds saves nearly three dollars from being spent abroad to purchase ships."

A dissenting member of the Commission, however, said:

"A nation attempting to solve its BOP (Balance of Payments) problem must spend its subsidy (in whatever form) on those export industries which have the greatest leverage vis-a-vis foreign competition* * *. There are many U.S. industries having a higher leverage and with better qualifications for support if the objective is a maximization of BOP relief per dollar of subsidy."

Considering balance of payments as justification for subsidy programs has been challenged by experts. Their arguments run from the impossibility of computing an accurate payments figure to the unexpected ultimate effects of industry subsidies.

The accuracy of MA and the Commission figures is questionable because it does not include

--the value of U.S. components used in foreign-built ships,

--payments by U.S. shipbuilders for use of non-U.S. inputs, and

--equity held by U.S. companies in overseas yards.

An unexpected effect of the industry subsidy is that it may adversely affect the domestic market for some U.S.-produced items and stimulate a greater outflow of dollars in terms of purchases of foreign products.

The international monetary system is characterized as a floating rate system, which means that the value of the dollar in foreign currencies is determined by the supply and demand of dollars in foreign hands. Subsidized shipbuilding in the United States avoids the purchase of ships abroad, reduces the supply of dollars in foreign hands, and increases the value of the dollar in foreign currencies. This in turn can increase the price of U.S. exports in foreign currencies and reduce the price of U.S. imports in dollars.

Eclipsing the question of whether or not balance of payments should be considered in Government program decisions is the existence or nonexistence of payment problems such as foreign trade deficits. The value to the United States of a reduction in currency outflow--the direct effect of the CDS program on the balance of payments--varies from year to year depending on the severity of the deficit problem. For example, in the fourth quarter of 1972 the United States was a net importer of goods and services at the annual rate of \$3.5 billion. In the fourth quarter of 1973, net exports were at the annual rate of \$8 billion.

DOMESTIC ECONOMIC BENEFITS

Domestic economic benefits have also been advanced as justification for subsidizing shipbuilding beyond that needed for national security.

Gross national product, tax revenue and employment

Shipbuilding subsidy programs cause money to be injected into the shipbuilding industry. This money flows from shipbuilding throughout other sectors of the economy and can multiply national income as it moves through the Nation's many payrolls and purchases. This has been termed the multiplier effect. The process, it is asserted, can increase employment and provide more tax income to the Treasury.

The Commission, for example described the benefits that would be derived from a fleet built in the United States, carrying 50 percent of all imported fuels and minerals needed through 1985. According to the Commission report,

"the construction program alone would generate, discounted at 10 percent, \$9.4 billion in new income and \$1.9 billion in taxes by 1985. * * *Over the same period, this work would create an increase in the gross national product, discounted at 10 percent, of \$28 billion, i.e. \$28 billion worth of goods and services that would not otherwise be available. * * *Considering only the discounted cost of the program, some \$3.6 billion consisting primarily of CDS subsidies, approximately \$2 billion would be recovered directly from maritime employment in the form of discounted income tax returns to the Treasury. If the tax payments, related to the multiplier are added, the total return to the Treasury becomes \$5.6 billion, an amount considerably in excess of cost."

A 1972 staff study entitled, "The Economics of Federal Subsidy Programs," printed for the use of the Joint Economic Committee suggested that subsidies be examined for net changes benefiting society. The Commission authors did not examine net change, as recommended, nor did they illustrate the special conditions under which the gross national product, employment and tax benefits may exist.

In areas where shipyards are major employers, CDS spending can increase regional income when unemployed people find jobs in shipbuilding. This spending, however, can also have a negative effect on the rest of the economy because resources diverted into shipbuilding by CDS expenditures under full employment must come from other regions. Federal funds spent on CDS that are taken from the private economy through taxes or borrowing could have been spent for other purposes. The result to the Nation in this case is income transfer, not creation. However, when unemployment is more than 4.5 percent (at this time a not unreasonable lower limit on employment) and/or capital assets are idle, there

can be a net economic benefit. Employment of these resources would not reduce other output and would increase shipbuilding output and gross national product.

If full employment exists, the economic effect of higher CDS expenditure levels can create or worsen inflation. When workers and suppliers are already employed, they must be bid away, at higher prices, from their current employment. The difference between the increased income generated by the shipbuilding industry using CDS and the decreased income generated by industries previously served may be only the result of higher prices; i.e., only inflationary.

Of the annual average unemployment rates in the locations of the 12 major shipbuilders during the years 1969-72, 48 percent were below the U.S. average and 42 percent were below the 4.5 percent lower limit.

If Federal programs take a year or so to be established on contract (obligated) and several more years to be completed, as in shipbuilding, then the gross national product, tax, and employment benefits depend on the existence of idle capacity and unemployment several years into the future. The reliability of employment and inflation projections several years into the future is seriously limited.

Regardless of projection limitations there is a history of minority unemployment higher than for the rest of the population which is being eased through yard employment practices. MA data showed that 27.9 percent of the work force in major yards in the first quarter of 1974 was from minority groups.

Development of skills

Although U.S. yards complain about labor turnover and the need for continuous training programs, creating or developing skills in individuals is one of the potentially quantifiable benefits of the shipbuilding support program. Through yard employment individuals develop skills that improve their earning power. Since the individual is trained because there is demand for the shipyard product, the CDS program enables the worker to acquire new abilities,

which continue to affect the economy regardless of where the individual is employed.

The benefits can be measured by the increased labor market value of trained individuals due to employment in CDS-supported shipbuilding.

Stimulation of innovation

Without the market created by CDS for U.S. yards, it is possible that liquefied natural gas ships would not have been designed or constructed in the United States. The program stimulated an infant liquefied natural gas shipbuilding industry and helped it over initial market entry barriers. The percentage of subsidy required has fallen rapidly and, in a recent case fell to zero, possibly because the United States was the only source able to meet the delivery schedule. Due to the cryogenic technology available in this country, U.S. yards may have an advantage over foreign yards in constructing liquefied natural gas ships, which might not have been exploited without CDS.

Nuclear ship propulsion, a military technology well established in the United States, may be the next commercial shipbuilding technology to be stimulated by MA programs, providing the price of oil is high enough to justify predicted nuclear costs.

It is true that liquefied natural gas carriers and nuclear propulsion can be purchased elsewhere, but when U.S. industry has a potentially competitive advantage, the short term subsidy risk is worth considering and, in the case of liquefied natural gas carriers, may have been worth the cost.

SUMMARY

This chapter has briefly described some important considerations about economic benefits claimed to result from Government support of shipbuilding. Although the scope of our work did not permit reaching firm conclusions, we observed that the claimed economic benefits are difficult

to evaluate and are not constant over time. These characteristics reduce the persuasiveness of economic benefits as justification for the program.

CHAPTER 4

OPPORTUNITIES TO MORE EFFECTIVELY AND ECONOMICALLY ACHIEVE NATIONAL SHIPPING AND SHIPBUILDING GOALS

LINK BETWEEN MERCHANT FLEET AND SHIPBUILDING SUPPORT

Government support of the shipbuilding industry is linked to merchant fleet support by the provisions of the Merchant Marine Act of 1936, as amended. The act specifies that only U.S.-built ships can be eligible for operating differential subsidies and that only ships which will be U.S.-owned and U.S.-registered are eligible for construction subsidies. Therefore, as stated by the Shipbuilding Commission, "the health of the shipbuilding industry and of the merchant marine are inextricably intertwined."

Most U.S.-flag merchant vessel operators must receive an operating subsidy to be economically viable in foreign trade. To be eligible for that subsidy and other forms of Government assistance the U.S.-flag ship must have been built in the United States. A competitive U.S.-built ship ordinarily needs to be constructed under the CDS program because of the relatively higher ship construction cost in U.S. yards. Because of this "inextricable intertwining" MA must choose between supporting a merchant fleet having the characteristics desired and accepting whatever shipbuilding industry results or supporting an industry having the characteristics desired and accepting a subsidized fleet limited to the construction capabilities of that industry.

To insure meeting the objectives for either the fleet or shipbuilding, the objectives for one or the other must be subordinate. Although it is possible, it is not likely that efforts to insure the objectives of one will also achieve the objectives of the other.

The hearings for the Merchant Marine Act of 1970 indicate congressional concern principally with declining numbers and increasing age of the merchant fleet and with shipbuilding efficiency, rather than with the existing shipbuilding capacity.

A primary objective of this act was to expand and modernize the active U.S.-flag merchant fleet. The fleet had been reduced from 1,145 ships in 1950 to less than 700 by 1971-- from a modern fleet to a fleet more than two-thirds of which were or were approaching 25 years old. In addition, the Congress expressed concern about the percentage of U.S. trade tonnage the fleet would be able to carry if this decline continued.

Discussion of Government effort to improve shipbuilding industry efficiency centered on efforts to insure a sufficient expected volume of business to increase industry incentive to modernize. It was expected that improved efficiency would result from modernization investment by the yards if they could depend on avoiding the cyclical pattern of business previously typical of the industry.

However, shipbuilding business is derived primarily from three sources: Navy construction, Jones Act, and MA subsidized construction. To avoid the cyclical pattern of business, one source of business could be adjusted to compensate for changes in the other source. Increases in the volume of business from the Navy and Jones Act have been forecast for the remainder of this decade. Therefore, it would appear that there would be less need for expanded MA subsidized construction to provide the needed volume of business.

The difficulty with adjusting the MA program as just described is the link between adding ships to the subsidized fleet and Government support of the shipbuilding industry. If expansion of the U.S.-flag fleet is to continue under current provisions of the law an expanded MA construction subsidy program must also continue. It appears, therefore, that CDS support of the industry is based more on the Nation's objectives for the U.S.-flag merchant fleet than on a need to provide Government support for developing or maintaining a specific size and type of domestic shipbuilding capability.

COMPARISON WITH FOREIGN SHIPBUILDING COUNTRIES

The Shipbuilding Commission noted that, "In most European nations, aid to shipyards is independent of the vessel's flag and aid to flag fleet operators is independent of the country of construction."

A large number of the ships that major shipbuilding nations added to their domestic merchant fleets from 1970 through 1973 was foreign built while at the same time domestically produced tonnage was exported for foreign flag registration. Statistics of the Organisation for Economic Co-operation and Development show that over half the tonnage of the 8 largest merchant shipbuilders¹ (ranked by size of order-book) was for export. In addition, more than a third of the tonnage added to the merchant fleets of these shipbuilding nations was foreign built. Thus the major shipbuilders were both exporting and importing ships at the same time. Below are the total statistics of these eight shipbuilders compared with those of the United States for 1970-73.

	Percent built for export		Percent imported	
	<u>United States</u>	<u>Foreign</u>	<u>United States</u>	<u>Foreign</u>
1970	1	58	1	36
1971	2	51	8	34
1972	1	55	^a 21	36
1973	1	66	14	45

^aThis figure is higher than usual because four container ships were imported by one U.S. company. The four constitute all the imported tonnage for that year.

SOME DISADVANTAGES OF LINKING
FLEET ADDITIONS AND SHIPBUILDING

The requirement that subsidized U.S.-flag merchant ships be U.S.-built and that ships built with subsidy be only for U.S. ownership and registry, can result in (1) the United States not developing or maintaining an industry of the size and capability needed or (2) spending more than necessary to achieve shipping and shipbuilding objectives.

Unstable market for U.S.-built ships

Cyclical variations in demand is a frequently cited problem of the shipbuilding industry. For example, a January 1974 Navy report concluded that,

¹Japan, Sweden, West Germany, Spain, France, United Kingdom, Norway, and Denmark.

"A widely fluctuating workload in ship construction and ship repair deemed the single most important cause of high costs and inefficiency for both commercial and naval shipyards on an individual basis."

The Shipbuilding Commission also cited unstable, cyclical workloads as one of the "most prevalent ills" of the shipyards. Figure 3 illustrates the changes in shipyard activity as measured by quarterly employment of the nine major yards and provides comparison with the overall industry average. This shows that moderate variations in total yard activity disguise significant instability at individual yard levels.

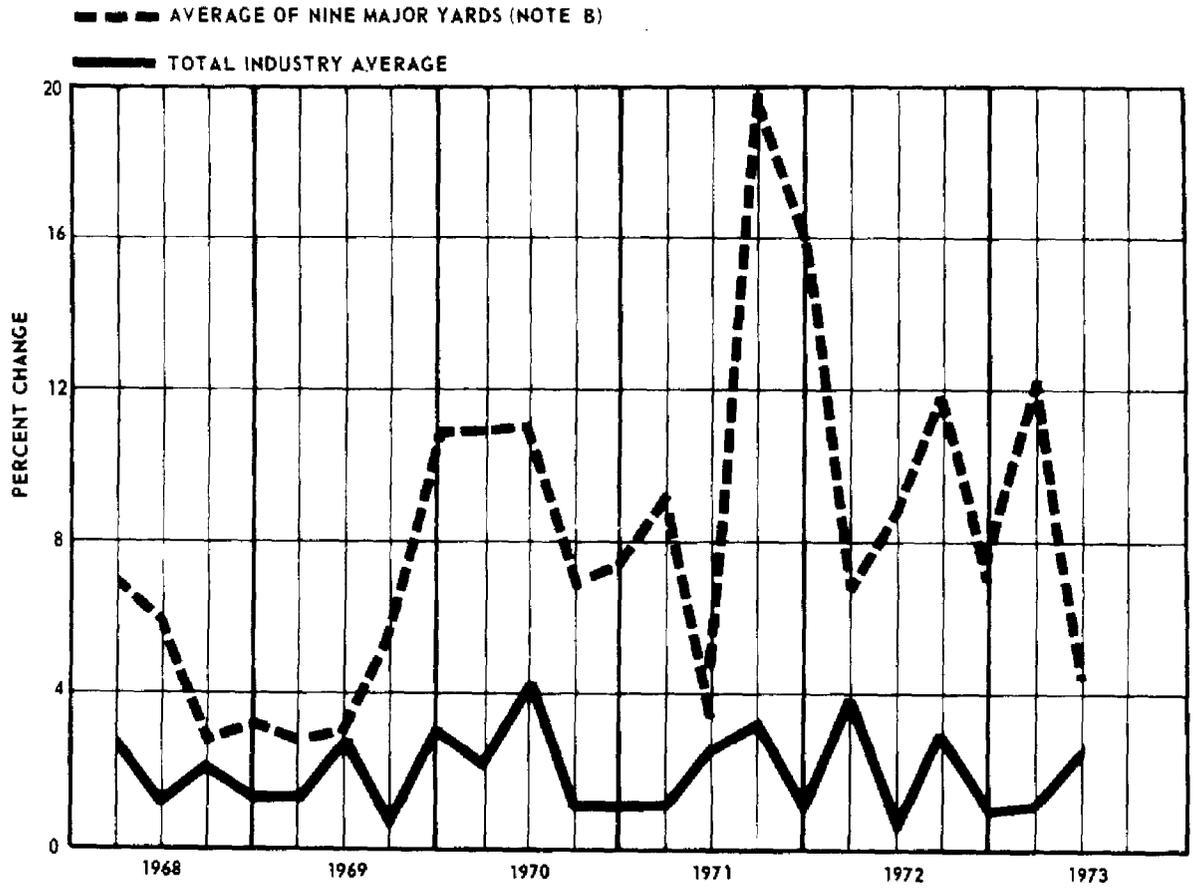
Instability of workload affects both the facilities and labor of the shipbuilding industry. Modernization of facilities requires investment which entails more risk if there are important variations in workload. The cost and productivity of labor is affected adversely by unavailability of future work. Also, because shipyards are often important local employers, variations in their work force caused by unstable workloads may have a serious impact on local economies.

It would seem desirable, therefore, that Government support of the shipbuilding industry provide, among other objectives, a more steady and predictable volume of business. This leveling could be accomplished, for example, by adjusting CDS support to complement changes in Navy construction and commercial ship demand derived from the Jones Act.

Using shipyard employment as a measure of activity at 6-month intervals between 1955-73, our analysis showed that MA program employment changes complemented those for the two other sources 58 percent of the time. Thus, although the CDS program has partially helped to achieve stability in shipyard employment, there appears to be room for improvement.

Present projections of increases in Navy and Jones Act activity when the MA program is at a higher level indicate that MA activity will not be complementing the impact of changes in other sources of demand on the shipbuilding industry during the next few years.

INSTABILITY OF EMPLOYMENT
(NOTE A)



- (A) Whether the change was an increase or decrease was ignored in order to show degree of change rather than net change.
(B) The percentage change in each yard was calculated and percentages averaged.

FIGURE 3

Conflict between MA and Navy
construction programs

There is potential for conflict between the MA subsidy program and the Navy program in a time of expanding Navy and Jones Act construction. A Navy study examining the capability of the shipbuilding industry to meet Navy demands over the next 5 years concluded that the industry could meet the facility demands but that increased costs would result from higher wages for skilled shipbuilders. The official who conducted the study told us that expanding shipbuilding activity, of which the MA subsidy program is a part, would encounter shortages of skilled workers causing their wages to be increased to attract the necessary numbers of workers. In fact, a January 1973 MA study of manpower shortages on the Gulf Coast forecasted shortages of journeymen welders and shipfitters.

Four meetings of the Joint MA-Navy Shipbuilding and Ship Repair Committee, held during November 1972 through June 1973, included discussions of this problem. The Navy expressed concern at the November 1972 meeting about possible labor shortages at a major shipyard because of MA-subsidized work being added when the labor force was being built up for Navy work only. At a January 1973 meeting, Navy requested that MA withhold further awards to the shipyard unless it satisfied the Navy its program was not jeopardized. Minutes of later meetings show that Navy concern for that particular shipyard was assuaged but that MA did not agree to a proposed statement of priorities governing ship construction in the event a future problem should develop.

A January 1974 Navy report noted a lack of interest of private shipbuilders in obtaining recent Navy construction work because they preferred commercial work. A recommendation was made that the Secretary of Defense consider placing new construction in naval shipyards because of this.

The Navy testified before the Seapower Subcommittee No. 3 of the House Armed Services Committee in March and April 1974 that increased commercial shipbuilding had resulted in shortages of skilled manpower. The Navy also stated that shortages in skilled manpower contributed to delays in delivery and increased costs of Navy ships. Private

shipbuilders testifying in July 1974 described problems in doing business with the Navy, generally citing low profits and "red tape."

Reduced opportunity for
series production of ships

The merits of series production¹ of ships, which would allow shipyards to use the modern and more economical construction techniques being practiced by some of the more successful foreign shipyards have been much discussed. The Shipbuilding Commission stated that the lack of repetitive work was also one of the "most prevalent ills" of the shipyards.

Series production reduces costs by using specialized facilities and by increasing labor efficiency through "learning curve" effects. Estimates of the number of ships necessary to realize the potential of the series construction concept have varied from five to ten. A shipbuilding company would have to see a large enough market for a ship size and type to warrant specializing its yard so that the capital investment could be amortized over a sufficient number of ships. The link between Government support of the merchant fleet and support of the shipbuilding industry limits the practicality of specializing yard facilities.

Achieving greater specialization means producing fewer ship types by the U.S. shipbuilding industry or producing ships for a larger market, which are the strategies used by foreign shipyards. To enable U.S. industry to produce fewer ship types, some ship types would have to be purchased abroad, and to enable the industry to produce for a larger market, either the U.S.-flag fleet would have to carry more cargo or there would have to be production for sale abroad. U.S. yards, when limited to the U.S. fleet as a market, as has been the case, must be prepared to build a variety of ship types and sizes. From 1971 to 1973, 17 different sizes or types of oceangoing commercial ships were contracted for in 10 yards.

¹The repetitive production by a shipyard of standardized or similar ships.

Series production of ships has been started in several U.S. yards since the 1970 Act, as shown below.

<u>Design</u>	<u>Number of ships contracted (through FY 1974)</u>
Basic 86,000 deadweight ton bulkship	a 13
LASH freighter	b 9
89,000 deadweight ton tanker	c 8
LNG	d 7
38,000 deadweight ton tanker	e 6
35,000 deadweight ton tanker	e 6
265,000 deadweight ton tanker	5
225,000 deadweight ton tanker	f 5
Military Sealift Command tanker	f 5

a Includes 4 ships without CDS.

b The LASH series actually encompassed 20 ships but the series started well before the 1970 Act.

c Includes 5 ships without CDS.

d Includes 4 ships without CDS.

e This series is without CDS.

f Four other tankers of this design are being built at another yard.

By contrast, of the 6 standard designs that a Swedish yard offered and sold to its customers as of October 1972, the least number of a design that had been ordered or built was 10, and 2 designs had been ordered or built more than 20 times. The Swedish shipbuilding industry may be the best example of the benefits of yard specialization and series production as it pays worker wages equivalent to those in the United States, yet competes in international markets.

Suboptimum development of
industry capabilities

When the 1970 Act was passed, it was envisioned that 300 ships would be built over a 10-year period. MA has stated that in terms of numbers, 300 ships will probably not be added through the CDS program but that, in "productive equivalents," a measure of ship cargo capacity, fleet expansion would be greater than the 300 originally contemplated because of the larger highly productive very large crude carriers and liquefied natural gas carriers now under construction. The effect of the 1970 decision, to rebuild the merchant marine, on the shipbuilding industry in terms of contract awards was shown in figure 2. Also, the Shipbuilder's Council of America announced at the end of 1973 that the backlog of orders on the U.S. shipbuilding industry was unprecedented in peacetime. At that time, the backlog was in excess of \$3.5 billion of merchant ships under construction or on order.

Of the more than \$3 billion in commercial ship contracts let between October 1970 (passage of the 1970 Act) and December 1973, 48 percent was for tankers, 29 percent for liquefied natural gas carriers, and 23 percent for all other types. The proposed 1975 MA budget indicated an intention to further concentrate subsidies on the construction of very large tankers and liquefied natural gas carriers. Because of their higher subsidy rate, the 225,000 or more deadweight ton tanker contracts awarded during fiscal year 1973 required the highest amount of CDS per ship even though they were not the most expensive ships.

Tankers of 100,000 deadweight tons or more accounted for 36 percent of the backlog of subsidy applications as of November 1973. Concern for expansion of the U.S.-flag tanker fleet has resulted in increased orientation of the industry toward tanker construction. Until recently, no tanker of the very large crude carrier type had been built in the United States, and remodeling or building of facilities has been undertaken or planned to enable the industry to meet this need. An industry spokesman, commenting on the effect of the 1970 Act in December 1973 said:

"U.S. tanker building capacity, in particular, is anticipated to expand further from the present annual level of approximately 1,500,000 dwt to considerable more than 3,000,000 dwt in 1978."

This is occurring at a time when worldwide very large crude carrier construction capability has been forecast to exceed demand from the latter part of this decade through the next and when foreign yards that have specialized in such construction have cost advantages which may be insurmountable in the foreseeable future.

Adverse effect on achieving
merchant fleet goals

When it is in the national interest to expand or modernize the U.S. fleet, the availability of funds for CDS and the capacity of the shipbuilding industry may seriously limit the speed with which this can be accomplished. Capacity in terms of facilities has not been a limiting factor since the end of World War II, but during discussions of proposed oil cargo preference legislation (H.R. 8193), some concern was expressed about the capacity of shipbuilders to construct the tankers that would be needed. Given enough time, of course, the industry could increase capacity in response to increased demand for shipbuilding. An alternative would be to increase U.S.-flag capacity more quickly through a foreign building program or transfer of presently foreign registered ships.

The recent pace of applications shows that the level of funding is potentially limiting for CDS. In only about 2 years to November 1, 1973, construction applications reached \$7.8 billion. A March 1973 MA forecast of construction with CDS between 1974-85 was \$14 billion, with new obligational authority for CDS forecast in the range of \$275 million to \$375 million. If the interest level in shipbuilding under the CDS program is sustained, MA obligational authority clearly would have to exceed that range to build the ships for which applications would be submitted.

One member of the Shipbuilding Commission, in dissenting from some of the overall conclusions of the Commission, spoke of this limitation as follows:

"It is clearly in the national interest to support a larger and more efficient U.S. flag merchant fleet than exists today. This does not, as many of the conclusions of the Commission imply, necessitate an equivalent support of the U.S. shipbuilding industry. For example, federal funds could be stretched to cover many more ships by permitting U.S. owners to purchase ships abroad and operate them under the U.S. flag with an operating differential subsidy, particularly if the Congress should fail to appropriate funds for the construction-differential subsidy program which would be adequate to sustain the on-going merchant marine objective."

Government cost

Focusing shipbuilding activity on certain ship types might maintain the required shipbuilding capability at lower cost. Assume for example, that the Government seeks to maintain a certain activity level in the industry as measured by dollar value of ship contracts. The CDS program would support a portion of that dollar value. If support were limited to those ships requiring less subsidy, the same dollar value of ship contracts would require less Federal funds. Alternatively, the Federal funds could be held constant and a higher activity level in terms of dollar value could be supported.

Dollar value of ship contracts may not be the best measure for the Government to use. Level of employment may be better. Possible reduced cost to the Government would be different if this measure were used because supporting a ship type with a lower subsidy rate might also change the resultant level of employment. The different ship type might require a different quantity and skill mix of labor. This is the sort of situation that would need to be studied to enable the CDS program to be administered for specific, independently defined shipbuilding industry objectives.

We made a simple analysis for illustrative purposes of the potential cost reduction benefits, as well as other benefits, in relaxing the link between expansion of the U.S.-flag merchant fleet and support of the shipbuilding industry.

The analysis is not intended to support a proposal--a much more sophisticated analysis would need to be made before the best ship mix specifically for Government shipbuilding industry objectives could be selected.

We assumed for this analysis that the United States would not support construction of very large crude carriers, but would buy them from foreign yards for U.S.-flag operation. This ship type was picked because (1) foreign yards specializing in this type can offer prices far below U.S. prices, (2) some forecasts indicate a worldwide overcapacity in this area during the latter part of this decade and into the next, and (3) considerable investment in new U.S. yard facilities will be required to create sufficient U.S. capability to construct this ship type because of its size.¹

Between October 1970 and November 1, 1973, MA agreed to subsidize construction of 9 tankers of 200,000 deadweight tons or larger. The subsidies will amount to over \$260 million. Since we have assumed that the United States would buy its very large crude carriers abroad, these funds would be released to build some other type of ship.

Our second assumption was that this other type of ship would be liquefied natural gas carriers. This ship was considered appropriate because

--it has a much lower subsidy rate than other types being produced,

--it apparently has high potential as an export item, and

--the higher degree of construction skills necessary may be preferable for mobilization purposes, though perhaps not for providing employment for unskilled workers.

¹A potentially important reason against ending support is that nuclear propulsion would become competitive for very large crude carriers. It may be that the United States would not want to give up entirely the capability of building such ships because the United States might be able to utilize its nuclear technology to build very large crude carriers at internationally competitive prices.

We based our analysis on the demand for liquefied natural gas carriers by applications for subsidy at MA and on the subsidy rate approved for liquefied natural gas carriers by MA. As of November 1, 1973, there were 20 applications pending for CDS for liquefied natural gas carrier construction--15 of these with price estimates. The subsidy rate for 3 liquefied natural gas carriers contracted in June of 1973 amounted to about 16 percent.

The results of our analysis to illustrate the cost reduction benefits showed that:

--over \$50,000,000 in CDS funds would remain to be used either for constructing other merchant ship types or released for other purposes, such as supporting operations of a larger U.S.-flag merchant fleet, or financing Navy ship construction,

--instead of 9 tankers, 15 liquefied natural gas carriers could have been built in U.S. yards encouraging series construction of a ship type the United States builds relatively less expensively,¹ thereby encouraging reduced dependence on Federal support,

--the United States would expand its fleet without expanding its shipbuilding capacity where world capacity may soon become excess and where the possibility of the United States becoming competitive is low, and

--U.S. yard activity would be supported on the type of ship construction requiring higher skills from the labor force.

Many other factors would have to be considered before this analysis could serve as the basis for actual program planning. However, it may be seen why separation of the Government objectives for support of the merchant fleet and shipbuilding might result in better fulfillment of both sets of objectives.

¹The 9 tankers could still be built in foreign yards without CDS subsidy, however, and would be operating as U.S.-flag vessels.

CONCLUSIONS

GAO believes the national goals for both the shipbuilding industry and the merchant fleet could be more effectively and economically achieved if MA had the authority to approve, in some circumstances, (1) subsidized construction of ships in U.S. yards for foreign-flag operation and (2) subsidized U.S.-flag operation of foreign-built ships. For example, it might be decided to subsidize ship construction for export if it were less expensive to specialize in those ships for which the cost differential is less and the U.S.-flag fleet needed less of them than the yards would produce at the desired activity level. Subsidizing U.S.-flag operation of foreign-built ships might be approved if the cost differential for a ship type is very great or if the Government wants the merchant fleet to expand at a faster rate than the U.S. yards can build.

Without this additional authority and flexibility in administering the subsidy programs for merchant fleet operation and ship construction MA is limited in its ability to:

--Provide desirable market stability for U.S. yards by leveling temporary peaks and valleys in U.S.-shipbuilding activity.

--Avoid or minimize potential adverse impact of merchant shipbuilding on cost and delivery of Navy vessels.

--Promote specialization in constructing ship types which U.S. yards are most competitive in building in order to reduce the amount of Federal subsidy funds required to offset the difference between U.S. and foreign construction costs.

--Encourage U.S. shipyards to invest in facilities and maintain those shipbuilding skills which are best suited for the Nation's needs for a private shipbuilding industrial base.

--Rapidly and economically expand or modernize the U.S.-flag fleet when U.S.-shipbuilding capacity or Federal construction subsidy funds are limited.

AGENCY COMMENTS AND OUR EVALUATION

MA commented on this report that our section on the conflict between MA and Navy construction programs "attribute to the problem a generality that seems in our opinion to be somewhat overstated." However, DOD expressed

"concern that MA and the Navy find themselves in competition with each other for their respective programs. To this end, it is in order for the Secretaries of Defense and Commerce to establish the forum in which their respective staffs may come to grips with the many problems mutually facing the two organizations."

We formed our position on the potential for conflict between the Navy and MA programs by (1) shortages in the skilled labor pool that shipbuilders must draw upon whether they build for the Navy or private interests and (2) the dialogue between Navy and MA in the minutes of the Joint MA-Navy Shipbuilding and Ship Repair Committee. We feel the legitimacy of concern about such potential for conflict is confirmed by DOD's comments on our report and statements by Navy officials cited in this chapter. The forum discussed by DOD may already exist in the Joint MA-Navy Committee (described on pages 11 and 29 of our report). This committee has already served as the forum for some of the problems jointly faced by MA and Navy.

MA comments suggested that our conclusion on needed changes in the direct subsidy programs "is based at root upon the fact that CDS rates for liquefied natural gas carriers are lower than CDS rates for large standard tankers." We based our conclusion on six disadvantages lack of flexibility in administering the CDS program seems to entail. One of these was higher-than-necessary Government costs. To illustrate how the costs might be lessened, we postulated eliminating very large crude carrier subsidies and using funds for subsidy of liquefied natural gas construction. Liquefied natural gas carriers were selected, among other reasons, because the subsidy rate was lowest, which presumably indicates U.S. shipbuilders are most competitive with that type of ship. MA commented that "it is not clear that other specific examples can be adduced to support the

generalization." In fact, tankers smaller than very large crude carriers also have a lower subsidy rate, though not as low as the liquefied natural gas carriers. The same example could be constructed using the CDS rates for smaller tankers in place of the liquefied natural gas carriers.

MA implies that implementing our conclusion would entail reorienting the entire commercial industry toward constructing liquefied natural gas carriers, and says, "In addition, there is a question regarding the national security implications of exclusive concentration on liquefied natural gas carriers." If our example were taken to be a proposed construction program for Government subsidy, which the report indicated it was not, and if it were to be implemented, there would still be sufficient subsidy funds for the contracts signed between January 1971 and December 1973 for 16 smaller tankers, 9 LASH ships, 4 container ships, and 2 ore-bulk-oil ships, in addition to the liquefied natural gas carriers. Thus, our example did not contemplate "exclusive concentration" on liquefied natural gas carriers.

MA concludes by saying,

" * * * these MarAd observations do not in themselves constitute a basis for rejection of the draft report's recommendation. They do, however, indicate that the apparent current basis for the recommendation is limited to a very narrow and questionable argument."

We believe, and MA does not disagree, that our recommendation still has merit. MA addresses only one of the reasons we noted for considering greater flexibility for the CDS and operating subsidy programs and does not address the central point of the example in which specialization in more competitively constructed ships is less costly to the Government of supporting the industry at a given level of activity. MA observations concerning over-concentration on liquefied natural gas carrier construction are undoubtedly true, indicating that liquefied natural gas carriers should be subsidized only until there is no more advantage, and some other ship type should be selected.

MA suggested that the report should include greater discussion of two topics: (1) the reason for any preference of private shipyards for commercial work and (2) measures

to increase industry productivity and reduce labor turnover. We agree these are worthy subjects for study. Unfortunately, they are outside the scope of this report.

Complete DOD and MA comments are shown in apps II, III and IV, respectively.

MATTERS FOR CONSIDERATION
BY THE CONGRESS

The Congress should consider giving MA the authority to approve, in appropriate circumstances, subsidized construction of ships in U.S. yards for non-U.S.-flag operation and subsidized U.S.-flag operation of foreign-built ships. GAO believes this authority will provide desirable flexibility in administering support programs so that modifications can be made promptly to achieve the Nation's changing merchant fleet and shipbuilding capability needs most effectively and economically. For example, it may be considered desirable to use such flexibility to achieve carrying a certain percentage of imported oil on U.S.-flag ships.

Letter of Transmittal
of the
Commission on American Shipbuilding
containing its conclusions and recommendations

APPENDIX I

COMMISSION ON AMERICAN SHIPBUILDING

1717 Pennsylvania Avenue, N.W.
Washington, DC 20006

October 19, 1973.

To the President and the Congress of the United States of America.

GENTLEMEN: The Commission on American Shipbuilding herewith respectfully submits its Report in accordance with the Merchant Marine Act of 1970.

The Commission, created by the Act in October, 1970, for a term of three years, has inspected and studied the American and foreign commercial shipbuilding industries intensively and, in response to the Act, has reached the following general conclusions:

1. The American shipbuilding industry is a relatively small but essential industry with respect to the economic, political, social, and defense needs of this country.

2. Where it has the opportunity to build ships in series and has a reasonable stability in its orderbook, it is fully capable of equaling the productive efficiency in any foreign shipbuilding industry for the construction of similar ships.

3. Because of the relatively higher wages and cost of materials in the United States, the industry has not been competing on a cost basis in the international market despite its potential equality in productive efficiency.

4. The Commission believes that the Merchant Marine Act of 1970 goal of 35 percent construction-differential subsidy by fiscal year 1976 will be met, barring any major international dislocations. It emphasizes, however, that the attainment of this goal is not of itself a sufficient indicator of the present or future capability and health of the American shipbuilding industry or the U.S. merchant marine.

5. Since new technology is rapidly disseminated throughout the world and since the rel-

atively long length of time required for the ordering and construction of a ship does not permit economic advantage resulting from new technology to be applied to a significant amount of production, it cannot be expected that research and development can overcome the competitive handicaps resulting from the higher U.S. standard of living.

6. The basic market for U.S. commercial shipbuilding is therefore essentially limited to the ships required to carry U.S. domestic and foreign commerce.

7. The American shipbuilding industry's construction of merchant ships consequently is generally dependent on the health, activity, and future prospects of the U.S. merchant marine.

8. The U.S. merchant marine is dependent on its capability to secure and carry an adequate amount of cargo at a reasonable profit.

9. There is an historically demonstrated and presently compelling national need, as expressed in the Declaration of Policy of the Merchant Marine Acts of 1936 and 1970, for this Nation to carry a substantial portion of its cargo in U.S.-built and U.S.-manned ships.

10. The share of U.S.-foreign seaborne trade tonnage carried in U.S.-flag ships has declined since 1950 to the point where U.S.-flag ships in 1972 carried only 22.2 percent of the general cargo, 1.6 percent of the dry bulk cargo, and 5.7 percent of the oil cargo.

11. In view of these low percentages and the increasing dependence of this country on substantial petroleum and gas imports, it is necessary to take action now to increase this Nation's direct participation and control in the transportation of these vital materials.

12. Because of the increasing bilateral trade pressure from developing and oil-producing

nations, because of the increasingly assertive participation of state-owned fleets in shipping, and because of the past reluctance of U.S. oil companies to build and operate U.S.-flag tankers, it appears necessary that a quota of the petroleum and gas trade be reserved for efficient and competitive U.S.-built, U.S.-manned ships if the United States is to have a significant portion of this transportation under its control and to have the capability to build and repair the necessary vessels.

13. The only practical, available method of building and operating the necessary petroleum and gas tankers to satisfy the quota is through the provisions of the Merchant Marine Act of 1970.

14. To provide increased capital for the construction of U.S. ships, provision should be made for tax-deferred repatriation of the earnings or proceeds of sale of foreign-flag ships owned by U.S. corporations or their subsidiaries into capital construction funds for the construction of U.S. ships in accordance with the present requirements of the Maritime Administration with respect to the operation of the funds.

15. Increasing, abnormal competition and pressure from state-owned fleets is causing and will increasingly cause significant losses in cargo for U.S. ships. A system of freight rate equalization should be adopted wherein punitive action could be taken in cases where cargo would be consistently carried by state-owned ships below what would be determined to be fair market value rates by the Federal Maritime Commission.

16. Present U.S. cabotage provisions are desirable for the continuing carriage of U.S. domestic trade in U.S.-built, U.S.-manned ships and should remain unchanged.

17. The continuous, uninterrupted carriage and delivery of seaborne cargoes is a first order requirement for the future health of the U.S. merchant marine, the economic well-being of its customers, and the best interests of the Nation as a whole. It is therefore necessary that labor and management adopt a formal system involving the entire industry which will provide the means for settling all disputes, both during and at the termination

of a labor contract, without resort to strike action.

18. The benefits of industry-wide cooperation in standardization, research, and the exchange of engineering and technical information are significant in other countries, particularly Japan. Similar benefits are largely denied to U.S. shipbuilders because of the possibility of antitrust action by the Government. Provision should be made to bring about this desirable cooperation with Government support.

19. The necessity for a firm national policy for the U.S. merchant marine and the shipbuilding industry is paramount. Such policy must be observed and implemented in all parts and at all levels of the Government.

20. Attainment of the maximum possible environmental protection of the navigable waters and shorelines through improvements in tanker design and construction standards will not be realized if regulations are imposed on U.S. operators and builders alone. This protection can be best attained through cooperation with an international organization such as IMCO.

In consideration of the foregoing conclusions and the studies, observations, and personal experience upon which they are based, the Commission recommends the following in the best interests of the shipbuilding industry, the merchant marine, and the Nation:

A. That Title I, "Declaration of Policy," of the Merchant Marine Act of 1936, as amended by the Merchant Marine Act of 1970, be reaffirmed as the national policy of the United States with respect to its merchant marine, shipbuilding, and related industries.

B. That a firm implementation of this policy and related laws be required of all departments and at all levels of the Government.

C. That with respect to petroleum and gas imports, a quota now be established for carriage in efficient and competitive U.S.-built, U.S.-flag vessels.

D. That the construction of vessels where necessary to carry the quota of petroleum and gas imports be accomplished with the aid of construction-differential subsidy as presently provided under the Merchant Marine Act of 1970.

APPENDIX I

E. That legislation be enacted to permit U.S. corporations, or their subsidiaries, owning foreign-flag ships to transfer the earnings of such ships, or the proceeds of the sale thereof, to affiliated U.S. corporations for the purpose of depositing such funds on a tax-deferred basis in capital construction funds for ship construction in accordance with all present requirements of the Maritime Administration with respect to the operation of the fund. A U.S.-citizen corporation within the meaning of the foregoing is a corporation which is a U.S.-citizen pursuant to Section 2 of the Shipping Act, 1916.

F. That legislation be enacted to establish provisions for freight rate equalization wherein importers or exporters using state-owned shipping services with rates consistently below fair market values determined by the Federal Maritime Commission will be held liable for the difference.

G. That cabotage provisions of present U.S. laws not be changed.

H. That a formal system be established by labor and management for the entire maritime industry which will provide the means for settling all disputes, both during and at the termination of a labor contract, without resort to strike action.

I. That the Government take positive steps to foster cooperation in the shipbuilding industry in research, standardization, and the exchange of engineering and technical information through provisions which would exempt such cooperation from antitrust action.

J. That the present tax laws and provisions for the financing of the construction and operation of U.S. vessels be retained.

K. That the protection of the navigable waters and shorelines of the United States from oil contamination by vessels in U.S.-foreign trade be achieved by working within the framework of international organizations such as IMCO for improved standards for tanker design and construction, not by unilateral regulation of U.S. operators and shipbuilders.

These conclusions and recommendations represent the views of five of the seven members of the Commission. Mr. Arthur M. Becker and Mr. W. H. Krome George have submitted the appended two letters taking exception to certain portions of the

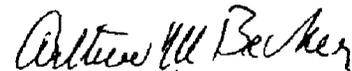
Report. Mr. George felt that it would be inappropriate for him to sign the Report because of the nature of his exceptions.

It has been a privilege to serve as members of this Commission. We hope that our Report will lead to a better understanding of the American shipbuilding industry and merchant marine and the vital role they should play in this Nation's future.

Respectfully submitted,



ALBERT G. MUMMA, *Chairman.*



ARTHUR M. BECKER, *Member.*



CHARLES A. BLACK, *Member.*



ANDREW E. GIBSON, *Member.*



JOHN T. GILBRIDE, *Member.*



STANLEY POWELL, Jr., *Member.*

Honorable RICHARD M. NIXON,
President of the United States.
Honorable SPIRO T. AGNEW,
President of the United States Senate.
Honorable CARL B. ALBERT,
Speaker of the United States House of Representatives.



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Maritime Affairs
Washington, D. C. 20540

JUL 23 1974

Mr. Victor L. Lowe
Director, General Government Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Lowe:

This refers to your letter of July 8, 1974, which transmitted and requested comment on your draft report, "Government Support of the Shipbuilding Industrial Base" (Code 950076).

This is an interim response intended to accommodate your request for comments early enough for you to consider them in your July briefing to the Seapower Subcommittee of the House Armed Services Committee. I am sure you will understand our need for additional time to generate final comments on a draft report so basic in nature and with such far-reaching potential consequences for a major United States industry. Our final comments will be furnished by August 30, 1974.

It is our initial impression that this represents a generally useful and commendable effort, but that it can perhaps be improved somewhat with additional work. As we understand it, the basic conclusions and recommendations of the draft report are as follows:

- a. It is concluded that the Department of Defense and the Department of Commerce employ significantly different emergency planning assumptions in assessing the adequacy of the shipbuilding industrial base. It is recommended in the interests of achieving an early resolution of their differences that the Secretary of Commerce and the Secretary of Defense review with appropriate congressional committees their views regarding the emergency planning assumptions.
- b. It is recommended, in the interest of more effective and economical achievement of national goals for the shipbuilding industry and the merchant fleet, that the Congress consider giving the Maritime Administration authority to approve, in appropriate circumstances, the subsidized construction of ships in U.S. yards for non-U.S. flag operation and the subsidized U.S. flag operation of foreign-built ships.



APPENDIX II

The conclusion and recommendation regarding emergency planning assumptions correctly represent certain differences of opinion regarding the probable duration of a future war that were reflected in correspondence between the Commission on American Shipbuilding (CAS) on the one hand, and the Department of Defense (DoD) and the Navy, on the other, in the winter of 1972-1973. However, neither DoD nor the Navy has taken a formal position on the magnitude of the industrial base required for timely repair and replacement of ships that might be damaged or lost in a war, and that magnitude is not necessarily a direct function of the duration of the war. Furthermore, the position taken by the Maritime Administration (MarAd) in support of the CAS view in 1973 has since been modified. In the light of these considerations it appears that the draft report may place undue emphasis on what is referred to as a "difference between MarAd and DoD assessment of [the] industrial base."

At present, it is the MarAd view that there is a significant requirement for an in-being shipbuilding base to meet overall U.S. needs arising from a major war even if that war is of short duration. We also feel that an industrial base for shipbuilding represents a useful hedge against the possibility of extended war. With respect to a long war, shipbuilding capacity can be looked upon as a long-lead-time resource similar to long-lead-time industrial and military material stocked by DoD for military use beyond the limits of short-duration war. There is also an analogy with strategic material stocks maintained by the General Services Administration to meet needs that might arise in a relatively long war.

Without regard to the length of possible major wars, however, MarAd views the industrial base requirement as depending on initial mobilization needs and, perhaps more heavily, on the requirement to replace ships needed for the reconstitution of essential commercial shipping service. This latter requirement could be significant in the case of a major war even if it were short because shipping losses are likely to be greatest in the early months of a war. Furthermore, shipping losses to allied nations could also be expected to be significant and many shipyards in allied countries would be likely to be damaged or destroyed. Thus a general shortage of shipping seems likely to follow a major war of short duration, and it appears unreasonable to anticipate that shipyards in countries allied to the United States could necessarily contribute in an important way to the construction of ships needed in an early postwar period for the renewal of Free World Commerce.

There has not yet been formal discussion of this concept between the Department of Commerce and the Department of Defense, and its quantitative implications in terms of potential shipyard capacity needs have not yet been fully investigated. However, significant disagreement appears unlikely, particularly since the provision of shipping service essential for commerce is the statutory responsibility of the Department of Commerce. (Shipbuilding requirements, if any, for reconstitution of Naval forces would be additional to those alluded to here.)

With respect to the draft report's recommendations regarding subsidized construction of ships built for export and operating subsidy for foreign-built ships, we agree that congressional action would be necessary. As to the desirability of such innovations, it seems clear that they would be advantageous in some respects. However, they could also entail disadvantages not yet clearly foreseen. Therefore, we would suggest that they be subjected to intensive analysis, to include investigation of their potential impact on all sectors of the U.S. Merchant Marine, before they are considered for implementation.

Detailed comment on all the points made in the body of the draft report is beyond the scope of this interim response. We do feel, however, that some comment is called for now regarding the discussion of "conflict between MarAd and Navy construction programs" on page 35. This discussion attributes to the problem a generality that seems in our opinion to be somewhat overstated. However, to the extent that there may be a general "preference for commercial work" on the part of the private shipyards, we feel that the GAO draft report would probably be more useful if it were to treat in some depth the reasons for any such preference.

On the other hand, partly because much of the Navy program is restricted by its nature to a small number of yards, there has been direct, clearly understood interaction between the two programs in relatively few instances. It is our feeling that such instances can be best handled on a case-by-case basis as they have been in the past.

One other detailed point appears worthy of mention at this time. MarAd projections of employment in private U.S. shipbuilding do not coincide with the graph presented as Figure 4 on page 20 of the draft report. The major difference is that the MarAd projection does not show the significant employment increase shown in Figure 4 for the years 1975 and 1976. It would appear useful to explore the reasons for this difference.

APPENDIX II

In general, as is indicated above, we feel that this draft report represents a very useful effort. We hope that this effort will be carried through to its logical conclusion. The suggestions set forth in this interim comment are intended to point to areas where some additional effort may be helpful.

To the extent that it is appropriate, we are prepared to assist in any way that we can.

Sincerely,


ROBERT J. BLACKWELL
Assistant Secretary
for Maritime Affairs



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D. C. 20230

October 23, 1974

Mr. Victor L. Lowe
Director
General Government Division
U.S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Lowe:

This is in reply to your letter of July 8, 1974,
requesting comments on the draft report entitled
"Government Support of the Shipbuilding Industrial
Base."

We have reviewed the attached comments of the
Assistant Secretary for Maritime Affairs and
believe they are responsive to the matters
discussed in the report.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Guy W. Chamberlin, Jr.", written over a horizontal line.

Guy W. Chamberlin, Jr.
Acting Assistant Secretary
for Administration

Attachment



APPENDIX III



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Maritime Affairs
Washington, D.C. 20230

SEP 23 1974

Mr. Victor L. Lowe
Director, General Government Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Lowe:

This refers to your letter of July 8, 1974, which transmitted and requested comment on your draft report, "Government Support of the Shipbuilding Industrial Base" (Code 950076). This is our final response. An interim response was transmitted on July 23, 1974.

Our initial impression that this represents a generally useful and commendable effort has not changed, nor has our feeling that it can be improved upon with additional work. The draft report's conclusions and recommendations emphasize: (a) a purported discrepancy between emergency planning assumptions used by the Department of Defense and Department of Commerce in assessing the adequacy of the shipbuilding industrial base; and (b) the desirability of legislation to permit subsidized construction of ships in U.S. yards for non-U.S. flag operation and the subsidized U.S. flag operation of foreign built ships. There is also discussion of what is referred to as a "conflict" between MarAd and Navy construction programs.

The discussion that follows addresses the draft report's recommendations and its comments on the relationship between the MarAd and Navy programs. It also notes certain underlying problems that affect the U.S. shipbuilding industry.

As was indicated in our interim comment, the draft report correctly represents certain differences of opinion regarding the probable duration of a future war that were reflected in correspondence between the Commission on American Shipbuilding (CAS) on the one hand, and the Department of Defense (DOD) and the Navy, on the other, in the winter of 1972-1973. However, there is at present no difference that we are aware of between the views of the Department of Commerce and the Department of Defense regarding the emergency planning assumptions that should be used in assessing the adequacy of the shipbuilding industrial base. Furthermore, it is not clear that the adequacy of that base is particularly sensitive to the likely duration of a future major war.

The reestablishment of commerce and the reconstruction of the Free World economy at the end of World War II depended heavily upon the vast shipping resources at the disposal of the United States at the end of the war. (The wealth of allied shipping was similarly useful after World War I.) Following a future major war of brief duration, however, U.S. and allied fleets would probably be severely decimated, and recovery would depend heavily on the reconstitution of shipping. Since it is likely that shipyards in allied countries would be either damaged or destroyed in such a major war, the burden of replacing lost shipping and repairing damaged ships would fall heavily on the United States.

In a recent analysis, MarAd calculated the time required to replace U.S. shipping losses that might be expected in a major short war. Not counting losses of ships from the National Defense Reserve Fleet, it was assumed that some 165 merchant ships would have to be replaced (based on Navy analyses of probable sinkings), and shipbuilding capacity normally devoted to Navy programs was considered not to be available. The analysis was undertaken under three alternative assumptions regarding the availability of the portion of our shipbuilding capacity that is normally devoted to CDS-supported ships: (a) unavailable; (b) available and (c) increased by 50 percent. Under these three assumptions estimated years required for merchant fleet reconstitution were, respectively, 9 3/4, 6, and 4 1/2, which might be reduced to some degree through concentration on simple utility ship designs, but which would still remain considerable in a period of shortage.

While the noted analysis involved reconstitution following a short major war, the in-being shipbuilding industry would also represent an essential asset in the event of a longer war. In fact, as was noted in our interim response, shipbuilding capacity can be looked upon as a long-leadtime resource similar to long-leadtime industrial and military material stocked by DOD for military use beyond the limits of a short war and to strategic material stocks maintained by the General Services Administration against the requirements of a long war.

The other explicit recommendation of the draft report is that "Congress consider giving the Maritime Administration the authority to approve, in appropriate circumstances, the subsidized construction of ships in U.S. yards for non-U.S. flag operation and the subsidized U.S. flag operation of foreign-built ships." In our interim response, we suggested that this recommendation be subjected to further analysis, to include investigation of its potential impact on all sectors of the U.S. merchant marine. We believe this suggestion is still appropriate, and we have a few additional observations respecting this recommendation.

APPENDIX III

Careful review of Chapter 4 of the draft report suggests that this general recommendation is based at root upon the fact that CDS rates for liquid natural gas carriers are lower than CDS rates for large standard tankers. While this point is referred to as "illustrative", it is not clear that other specific examples can be adduced to support the generalization. While it may eventually be demonstrated that the recommendation does indeed have general merit, it is not clear at this point that the unique fact of U.S. near-competitiveness in LNG construction is adequate to support it, particularly since projections of demand for LNG ships are now much lower than they were as recently as a year ago. Furthermore, with present facilities, U.S. capacity to produce these highly specialized ships is placed at about five per year. Significant expansion of that capacity would require considerable time, and its economic advisability in the face of limited demand would be highly questionable. (In addition, there is a question regarding the national security implications of exclusive concentration on LNGs.)

The draft report's recommendation of ODS for imported ships appears to stem from the same basic reasoning as the recommendation of CDS for export ships. That is, if shipyards are occupied building ships that require little CDS money, i.e., LNGs, then the draft report implies that other ship types should be imported to provide balance in the U.S. flag fleet.

As is indicated above, these MarAd observations do not in themselves constitute a basis for rejection of the draft report's recommendation. They do, however, indicate that the apparent current basis for the recommendation is limited to a very narrow and questionable argument.

With regard to the discussion of "conflict" between MarAd and Navy construction programs, we suggested in our earlier response that, to the extent that there may be a "preference for commercial work" on the part of the private shipyards, the GAO draft report would probably be more useful if it were to treat in some depth the reasons for any such preference. Testimony presented by industry spokesmen between July 9 and August 13, 1974 in hearings held by the Seapower Subcommittee of the House Armed Services Committee should provide a good starting point for an analysis of such reasons.

It is also necessary to restate our earlier observation that, despite the generality assigned to it in the draft report, there has in fact been relatively little direct interaction between the Navy and MarAd programs. We continue to feel that instances of interaction, or "conflict", can best be treated on a case-by-case basis as they have been in the past.

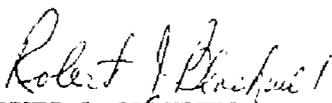
One further general observation seems appropriate. The differential between U.S. and foreign shipbuilding costs reflects not only the generally higher cost of U.S. labor and materials but also a U.S. disadvantage in U.S. shipyard capital investment, perpetuated to a degree by low profits, and a very high rate of labor turnover. Investment in U.S. yards has increased significantly since the passage of the Merchant Marine Act of 1970, ameliorating but not eliminating, the U.S. disadvantage in this area. Labor turnover, resulting largely from the continuing migration of trained specialists into the construction industry, persists at a high level as a deterrent to productivity, not only in merchant ship construction, but also in Navy ship construction in private yards.

Despite the continuing progress of the Maritime Administration in promoting industry efficiency and reducing CDS levels, it is our feeling that there is a need for additional measures to improve industry productivity, and particularly to reduce labor turnover. Such measures are necessary in the interests of increasing U.S. competitiveness and stabilizing the shipbuilding mobilization base. It appears to us that additional concentration on these fundamental factors would increase the utility of a report concerned with the role of the CDS program in maintenance of the mobilization base.

In general as was indicated in our interim comment, we feel that this draft report represents a very useful effort. Our intent in this comment is to point to certain areas where additional effort appears to be called for.

To the extent that it is appropriate, we would like to assist in any way that we can.

Sincerely,


ROBERT J. BLACKWELL
Assistant Secretary
for Maritime Affairs

APPENDIX IV



ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

INSTALLATIONS AND LOGISTICS

11 SEP 1974

Mr. R. W. Gutmann
Director, Procurement and Systems
Acquisition Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Gutmann:

This is in response to your letter of July 8, 1974, to the Secretary of Defense which forwarded copies of your draft report on "Government Support of the Shipbuilding Industrial Base." (OSD Case #3870)

The report reflects an extensive study and analysis of the U. S. Shipbuilding Industry. The substance of the report would appear to derive from the Report of The Commission of American Shipbuilding and a review of the major legislation governing shipbuilding, ship construction subsidies, and shipyard utilization.

Two major considerations, not addressed in the report, but which are essential in this study, are the shortage of skilled manpower and the shortage of steel. The United States cannot achieve a strong and effective ship construction and ship repair industry without skilled manpower and an adequate supply of steel. At the present time, the entire industry is suffering from shortages of skilled manpower. I will not go into the plethora of causes for these shortages. A quick look at the shipbuilding industry's skilled personnel age groups will reveal that significant blocks of these personnel will arrive at retirement simultaneously which will increase the severity of the problem as time proceeds. Action involving government support is going to have to be taken to alleviate this problem. Most of the industry experiences difficulty in obtaining steel. The increased demand for steel generated by the large MARAD and Navy shipbuilding programs themselves have contributed to the shortage. Again I shall not go into the many other contributing factors. The government must field this problem in terms of resolving the issues of demand versus capacity, ore resources, reclamation requirements, and priorities assessment from a national overview.

APPENDIX V

PRINCIPAL OFFICIALS RESPONSIBLE FOR ADMINISTERING
ACTIVITIES DISCUSSED IN THIS REPORT

Tenure of office
From To

DEPARTMENT OF COMMERCE

SECRETARY OF COMMERCE:

Frederick B. Dent	Feb. 1973	Present
Peter G. Peterson	Feb. 1972	Feb. 1973
Maurice H. Stans	Jan. 1969	Feb. 1972

ASSISTANT SECRETARY FOR MARITIME
AFFAIRS-MARITIME ADMINISTRATOR:

Robert J. Blackwell	July 1972	Present
Andrew E. Gibson	Mar. 1969	July 1972

DEPARTMENT OF DEFENSE

SECRETARY OF DEFENSE:

James R. Schlesinger	July 1973	Present
William P. Clements Jr. (Acting)	Apr. 1973	June 1973
Elliot L. Richardson	Jan. 1973	Apr. 1973
Melvin R. Laird	Jan. 1969	Jan. 1973

DEPUTY SECRETARY OF DEFENSE:

William P. Clements	Jan. 1973	Present
Kenneth Rush	Feb. 1972	Jan. 1973
Vacant	Jan. 1972	Feb. 1972
David Packard	Jan. 1969	Dec. 1971

ASSISTANT SECRETARY OF DEFENSE
(INSTALLATIONS AND LOGISTICS):

Arthur I. Mendolia	June 1973	Present
Hugh McCullough (Acting)	Jan. 1973	June 1973
Barry J. Shillito	Feb. 1969	Jan. 1973

Underlying the entire study is our concern that the MARAD and the Navy find themselves in competition with each other for their respective programs. We should establish a way to determine the relative priorities of military and commercial shipbuilding so that the national interests are served. To this end, it is in order for the Secretary of Defense and the Secretary of Commerce to establish the forum in which their respective staffs may come to grips with the many problems mutually facing the two organizations. The several problems and recommendations of the subject study would be addressed most appropriately in this forum.

Subsequent to the joint review of mutual problems it may be in order for the Secretary of Defense and the Secretary of Commerce to meet with the appropriate committees of Congress.

Sincerely yours,



ARTHUR I. MENDOLIA
Assistant Secretary of Defense
(Installations & Logistics)

APPENDIX V

SECRETARY OF THE NAVY:

William Middendorf II (Acting)	Apr. 1974	Present
John W. Warner	Apr. 1972	Apr. 1974
John H. Chaffe	Jan. 1969	Apr. 1972

COMMANDER, NAVAL SEA SYSTEMS COMMAND:
(note a)

Rear Adm. Robert C. Gooding	Aug. 1972	Present
Rear Adm. Nathan Sonenshein	Aug. 1969	July 1972

a/ Formerly Naval Ship Systems Command



Copies of GAO reports are available to the general public at a cost of \$1.00 a copy. There is no charge for reports furnished to Members of Congress and congressional committee staff members; officials of Federal, State, local, and foreign governments; members of the press; college libraries, faculty members, and students; and non-profit organizations.

Requesters entitled to reports without charge should address their requests to:

U.S. General Accounting Office
Distribution Section, Room 4522
441 G Street, NW.
Washington, D.C. 20548

Requesters who are required to pay for reports should send their requests with checks or money orders to:

U.S. General Accounting Office
Distribution Section
P.O. Box 1020
Washington, D.C. 20013

Checks or money orders should be made payable to the U.S. General Accounting Office. Stamps or Superintendent of Documents coupons will not be accepted. Please do not send cash.

To expedite filling your order, use the report number in the lower left corner of the front cover.

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. GENERAL ACCOUNTING OFFICE



THIRD CLASS

Mr. T. E. Sullivan
Transportation
Room 5049

5033

RECEIVED
USDAO

MAR 4 1978

TECHNICAL SUPPORT SERVICE
REGISTRATION
AND CLAIMS DIVISION